STARTER HOMES

An Annotated Bibliography

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for

ONTARIO MINISTRY OF HOUSING

Housing Policy and Programs Development Branch

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INTRODUCTION

This bibliography is the result of a literature review of materials concerning the development and production of new housing which is or could be affordable by mid- and low-income home buyers. Most of the resources surveyed are Canadian and American; while a very few resources from other countries are included, a systematic search was made only of Canadian and American materials. The bibliography provides a brief description of the contents of each entry, and often a brief assessment of the quality or usefulness of the entry.

The bibliography is presented in 6 sections:

1. General .....pages 4-17

   --materials covering more than one aspect of cost reduction.

2. Administration and Planning .....pages 18-33

   --materials concerning cost reductions through regulatory and administrative reform.

3. Site Design and Engineering .....pages 34-43

   --materials concerning cost reductions through site design and site servicing.

4. Housing Unit Design and Engineering .....pages 44-53

   --materials concerning cost reductions through design and construction of housing units.

5. Market Research .....pages 54-55

   --materials concerning marketing of lower-cost housing.

6. Potential Resources not seen .....pages 56-61

   --promising materials not found or not surveyed.

Entries are listed in each section alphabetically by author or corporate author. Please note, however, one exception: Canada Mortgage and Housing Corporation was known earlier as Central Mortgage and Housing Corporation, so for ease of finding CMHC corporate-authored materials these are all alphabetized as if

Canada Mortgage and Housing Corporation.

The bibliography also provides an indication of the location where each entry may be found. Since the bibliography was prepared for the use of the Ministry of Housing's Policy and Program Development Branch, locations listed are those most accessible to the Branch's Toronto office. Locations are reported as follows:

the resource was searched first at the Ontario Ministry of Housing Library;

if not found, then it was searched for in the University of Toronto library system;

if not found, then it was searched for in the ICURR collection;

if not found, then it was searched for in the Metropolitan Toronto Municipal Reference Library.

As a result of this procedure location reports are not exhaustive (a resource listed as found in OMH may also be found in the U of T system, ICURR, or the Municipal Reference Library) but are structured for ease of access: for example, if a resource's location is given as the Municipal Reference Library, it is not available from ICURR, the U of T system, or from the Ministry library.

LOCATION CODES:

The most accessible location of each entry is indicated in square brackets following publication data by the following codes:

ARCH: U of T Architecture
Room 066
230 College Street
Toronto, Ontario
(Contact: Pamela Manson-Smith, 978 2649)

CUCS: Centre for Urban and Community Studies
University of Toronto
455 Spadina Avenue
Toronto, Ontario M5S 2G8
(Contact: Judy Kjellberg)

ENG: Engineering Library
University of Toronto
Room 2402
10 King's College Road
Toronto, Ontario

ICURR: Intergovernmental Committee on Urban and Regional Research
123 Edward Street, Ste. 625
Toronto, Ontario M5G 1E2
(Contact: Wayne Berry, 966 5629)

MTL-MR: Metropolitan Toronto Library
Municipal Reference Branch
Toronto City Hall
392 7990
NOTE: MTL-MR materials do not circulate.

NTIS: United States Department of Commerce
National Technical Information Service
(Data base accessible through the Ontario Ministry of Housing library)

OMH: Ontario Ministry of Housing Library
777 Bay Street, Toronto

PPDB: Ontario Ministry of Housing,
Policy and Programs Development Branch
777 Bay Street, Toronto

ROBA: Robarts Library
University of Toronto
130 St. George Street
Toronto, Ontario

SECTION 1: General Resources

American Planning Association. Planning for affordable single-family housing. Chicago: APA, January 1986. [OMH: Vertical File "Housing-Costs,"item number 86-82.]

--a 15 page pamphlet designed for lay use (for example, for citizens sitting on zoning or planning committees) to introduce and advocate recent developments in affordable housing. Useful and well structured one page summaries are given to: local government action to cut costs, efficient (= small) houses, compact lots and small-lot districts, zero lot lines, cluster designs, design enhancement of small lots, site servicing standards, and manufactured housing. Illustrations (photographs and plans) are found throughout.

Baldwin, Patricia. A review of small lot housing in ten metropolitan areas across Canada. Vancouver: Patricia Baldwin, Planning Consultants, n.d. (1983?). [ICURR: BH 244]

--66 pages. This study attempts to gather data concerning the scope of small lot housing in Canada and the range of legislative standards applied to small lot housing, and to review post-occupancy user assessments of higher density smaller lot homes. It also addresses questions concerning the effectiveness of small lot housing in providing lower cost housing which is attractive and livable. The data for the review consisted of surveys of municipal officials, assessment of specific legislation, review of user studies, and other relevant materials where available (municipal policy statements, newspaper articles, etc.). Results of the review are reported in summary form under the headings: distance from urban centres, lifestyle preferences (the further from a city the more small lot housing was perceived as unacceptable), development industry pressures (the initiative for small lot housing comes usually from developers), and site and unit design criteria. Five chapters then provide a detailed analysis of data for five provinces (Quebec, Ontario, Manitoba, Alberta, and British Columbia), summarizing for each province the extent and distribution of small lot housing, market and legislative factors affecting the use of small lot housing, different zoning legislations, and site and unit criteria.

Barton Myers Associates. Alternatives to high rise. Oliver/Garneau. Edmonton: Barton Myers Associates, June 1979. [ICURR: UH 287]

--115 pages. A background study intended to inform the City of Edmonton's development of a then-new general plan, and to propose lower-rise, more livable housing developments as a better means of achieving and maintaining appropriate urban densities. The report is very specific to Edmonton, and consists of an evaluation of development issues in two Edmonton neighbourhoods (Oliver and Garneau). Relevant aspects of this report are 1. an assessment of land use regulations (development and zoning controls) and approval procedures, and recommendations to alter regulations to encourage innovation

and streamline approval process, and 2. case studies of specific blocks showing possible alternative forms of low-rise attached housing, and providing cost analyses of these proposed developments.

Beck, Robert J., Robert Rowan, and Pierre Teasdale. User generated program for lowrise and multiple dwelling. Vol. 1, Site design requirements. Vol. 2, House design requirements. Montreal: Centre du Recherches et d'Innovation Urbaine, Universite de Montreal, 1975. [OMH: 728.1 C397 v.1]

--Vol.1: 193 pages; vol. 2: 450 pages. These two volumes analyse a survey of five low rise multiple family dwellings (row and stacked) in Montreal, Quebec, Sydney N.S., and Ottawa. The purpose of the survey was to generate data concerning user perception and use of low rise multiple unit housing, in order to develop assessments of user needs and corresponding design requirements. It is hoped that this data will aid housing designers to approach design problems from the perspective of the potential user. The introduction to vol. 1 describes the physical characteristics of the developments surveyed, the demographic characteristics of their residents, and the research methods employed in the study. The rest of Vol. 1 addresses site design under the headings of social, leisure, security, access, and maintenance requirements. Vol. 2 addresses house design under the headings housing form (including features of unit grouping), access, unit spaces (functional areas such as kitchens and living areas), leisure (patio and landscape), security, personal care, maintenance and management. Each volume presents very detailed and specific recommendations covering a very wide range of design characteristics; for example, topics discussed range from unit grouping to placement of cable TV outlets.

Buchinger, Alfred. Evaluative study of the owner as participant house builder. Canada Mortgage and Housing Corporation External Research Program Research Report, February 1984. [ICURR: BI 030]

--60 pages. An assessment of owner-builder programs and policies in West Germany, with some consideration of U.S. resources as well. The report covers all aspects of owner participation in new house construction: government policies in aid of such endeavours, alternative financing arrangements supportive of owner-building, and owner-built housing construction materials (using various levels of pre-fabrication) available in Germany and the U.S. The report also addresses the advantages of and impediments to making owner building a more significant phenomenon in Canada.

Canadian Real Estate Association. Housing in Canada. A continuing challenge. All Sector National Housing Conference Report. Don Mills, Ontario: Canadian Real Estate Association, 1982. [OMH: 301.54 C212]

224 pages. Report of a conference sponsored by the Canadian Real Estate Association in March 1981. The conference sessions covered a very wide range of topics. Sessions

relevant to this bibliography include: "Is home-ownership an appropriate goal for Canadians in the 80s?..." (pages 45-54), "Is there scope for further innovation in housing design and efficiency?" (pages 81-88), "How much do existing municipal regulations cost? Are they worth it?" (pages 97-104), and "Are we producing the right kind of housing? Is the housing produced compatible with the needs of an energy-conserving society?" (pages 189-196, discussing design and availability of smaller homes). Each session centred on a panel which was usually a mix of politicians or public administrators, academics, and spokespersons of private associations. The report of each session provides a transcript of panelists' addresses and questions from the floor.

Desautels, Aime. "Operation 10 000 logements." Nomination form for the Candian Association of Municipal Administrators Best Innovative Program, September 1979. [ICURR: HC 176 (doc.8)]

--Approximately 15 pages. A brief description of Montreal's Operation 10 000 logements (see entry below, author "Ville de Montreal"), and a collection of newspaper articles praising the program.

Driver-Reid, Keith, Bill Wyness, Bruce Raber, and Mark Betteridge. Evaluating multiple family and medium density housing. Alberta Municipal Affairs, Planning Services Division, September 1981. [ICURR: HI 045]

--133 pages. Subtitled "A manual to assist in the assessment, evaluation, and development of multiple family and medium density housing, particularly in Alberta's small towns." Part 1. preparing for the development (description of the approval process, and issues concerning ownership, market assessment, and management); part 2. the site (addressing all aspects of site design); part 3. the unit; part 4. summary evaluation (a checklist). The handbook is thorough in scope but brief in treatment, referring the reader throughout to other sources (which are listed also in this bibliography).

Engstrom, Robert L., and Marc Putnam. Planning and design of townhouses and condominiums. Washington: Urban Land Institute, 1979. [OMH: 334.1 E57 (not found); ARCH: NA 7520 E53; MTL-MR: 711.58 E54]

--246 pages. A comprehensive guide to the planning and design of medium density townhouse developments, with reference also to mid- and high-rise structures. Chapters address each stage or aspect of development: 1. introduction; 2. livability and process (introduction to factors which make townhouses successful living environments, and a review of the development team and the processes of gaining government approvals); 3. program determinants (site acquisition and assessment); 4. project and site planning (land use and housing mix, roadways, open space, utilities); 5. building site design (parking, building/road relationships, energy considerations); 6. building design (different housing forms, interior and exterior space, construction details); 7. amenities (landscaping, recreation, site lighting, etc.); 8. mid- and high-rise

structures (a brief discussion structured similarly to chapters 1-7); 9. community associations (design and marketing of successful associations for the maintenance of common space); 10. marketing techniques. Appendices report a buyer likes and dislikes survey of Minneapolis-St. Paul townhouse and condominium projects. While this resource is not directed specifically to the construction of low-cost housing, many references are made throughout to cost-effective development techniques.

Fletcher, June. "A step up." Builder 8 (July 1985), 69-77. [OMH: Periodicals.]

--Recent "starter home" developments around the U.S., described as affordable but with design features characteristic of more expensive homes. Prices of U.S. $95-130,000, however, may take these out of the "affordable" range, depending on equivalent Canadian market value.

Greater Vancouver Regional District. Greater Vancouver Regional District Housing Information. Pamphlet, November 1978. [ICURR: HH 090]

4 pages. A list of 28 publications and other information services of GRVD's Compact Housing Program (1975-77). Publications include brochures on many aspects of design, and resident attitude surveys. Other services listed are project case files for approximately 200 developments built in GVRD, and a slide/tape show concerning medium density housing for families called "A place of your own."

Greater Vancouver Regional District Planning Department. Background paper. Compact residential communities in the Greater Vancouver Regional District. Greater Vancouver Regional District Planning Department, June 1974. [ICURR: HH 090]

--Approximately 60 pages. A report produced for the GVRD Planning Department to aid in the assessment of possibilities for higher density and alternatively designed housing developments. Section 1 addresses the need in Vancouver for lower cost and more land efficient housing. Sections 2 and 3 describe compact residential communities and explain their advantages (social and economic). Section 4 assesses impediments to compact housing developments in Vancouver (resistance to change on the part of municipal officials, hesitant developers, design problems, municipal administration problems and servicing costs). Appendices show alternative conventional and higher density developments of (i) three typical adjacent city lots, and (ii) a city block.

Greater Vancouver Regional District Planning Department, and the Canadian Housing Design Council. A qualitative checklist for compact housing. Vancouver: Greater Vancouver Regional District Planning Department, February 1975. [OMH: 728.1 V223]

--A checklist designed for the assessment of the quality of medium density housing. "Quality" here means the character-

istics of housing which affect the daily living and satisfaction of its residents. The checklist is given in the form of 76 questions, divided into three sections concerning (1) the surroundings of the housing development, (2) the area in the immediate vicinity of the dwelling unit, and (3) the housing unit itself. Each question is provided with answering examples that improve living quality. Appendices on privacy and sound transmission are attached.

Greater Vancouver Regional District/Pacemaker Homes/Municiplaity of Surrey. Zero lotline subdivision demonstration project. Vancouver: GVRD Planning Department, November 1977. [OMH: 333.38 C736]

--23 pages. Description of a 36 unit subdivision developed in co-operation with the GRVD planning department. Section 1 provides basic data concerning lot size, site layout, and an analysis of cost (the units sold for $44-57,000 in 1977). Section 2 provides a history of the development, including a very brief description of passage through the regulatory process and municipal contributions (municipally owned and maintained visitor parking areas and maintenance of a developer-built children's park). Section 3 gives a detailed account of the development's features: location, unit design (and design flexibility to meet individual owners' needs and preferences), zero lot line siting and unit design features relevant to zero lot line siting, siting criteria imposed on developers by the municipality through a land use contract, engineering and utilities (right of ways, innovative road and sidewalka dimensions and design, lighting, parking), landscaping and fencing, children's park, unit price, and demographic and economic data concerning purchasers (typically first home buyers, 26-40 years of age, earning $15-24,000 [1977]). The report's conclusions claim success and urge development of comparable housing.

Harding, Michele, Kerry Wasserman and Andrew Zdanowicz. User study: zero lot line concept. Ontario Ministry of Housing, July 1975. [OMH: 711.5 H842]

--140 pages. A report of a study whose purpose was to assess two housing developments (one in Bramalea, the other in Windsor) which were designed using cost-saving innovations (zero lot lines, alternative storm sewering, roll curbing, few sidewalks and so forth). Residents were surveyed to determine adequacy of design, and recommendations made to improve similar zero lot line development designs. The recommendations address many features of the developments: general characteristics (services, housing mix); traffic, circulation and parking; site planning (lot size and shape, lot design, drainage and landscaping); privacy; unit design.

Housing and Urban Development Association of Canada, and Canadian Housing Design Council. Housing design. Part 1, Opportunities and alternatives. Part 2, Compact housing. Canada's alternatives. n.d. (circa 1980) [MTL-MR: SLIDE 363.50971 D39]

--160 slides and two mono audio cassettes presenting alternatives for smaller scale and more livable housing in Canada. No printed material accompanied the slides and cassettes at the Municipal Reference Library, and the resources there for viewing slides and listening to cassettes are very limited, so the character of the presentation could not be assessed adequately. Cost or availability could not be determined. The presentation seemed of good quality, however, and (also because of the quality of other work of both HUDAC and CHDC) this resource merits a proper assessment.

Housing Development Directorate. Starter homes: a report of a DOE [Dept. of the Environment] survey of new small houses and flats for sale. HDD Occasional Paper 2/80. England: Her Majesty's Stationary Office, 1980. [OMH: 363.59 M227 2/80]

--An assessment of eight sites where small two-bedroom starter homes and extendible homes were offered for sale, and an informal survey of the attitudes of developers, planning authorities and residents. Data is given for each of the eight sites concerning the design and cost of homes, and the income and other social characteristics of purchasers. A detailed analysis is also provided of the types of accomodation found in the sites--floor plans, the use made of the spaces by the residents, and residents' assessments of the quality of design--and a similar analysis made of the exterior characteristics of the sites. This survey would seem useful in the avoidance of design inadequacies.

Jensen, David R., and HOH Associates. Zero lot line housing. Washington: Urban Land Institute, 1981. [ARCH: NA 9051.5 J4]

--150 pages. A very thorough discussion of every aspect of zero lot line housing; a major resource. In addition to expected topics of discussion--site design, building design, and appendices showing sample ordinances--Jensen includes sections on the history of zero lot line housing, site selection considerations, marketing considerations (a detailed analysis of actual market acceptance of existing U.S. zero lot line developments, buyer profiles, and design considerations relevant to anticipated market), construction considerations (unusual construction problems associated with zero lot line housing, and helpful suggestions), "processing" (advice for gaining zoning/development plan approvals), and legal implications (for example, project agreements for maintenance and acceptable use of private space; appendix A gives sample covenants). Each chapter is comprehensive, well presented and generously illustrated.

John Bousefield Associates, and Paul Theil Associates. Lowering the cost of new housing. Ontario: Urban Development Institute, February 1976. [OMH: 690.031 U18]

--40 pages. A report intended to demonstrate the housing industry's committment to support the development of lower cost housing, and to present workable alternative site planning to increase density and reduce costs. The report's method is to present two hypothetical 200 acre site plans, the first typical

of any suburban site within Zone 1 of the central Toronto region, and the second a higher density and alternatively planned development of the same site. Both plans allow 80% ground related family housing and 20% apartments, but the alternative site achieves approximately three times the density of the typical site. The lower cost plan calls for predominantly three bedroom homes averaging 1000 sq.ft., each with private garden, off street parking, and exclusive vehicular access on its own lot, but utilizes many more semi-detached, duplex, quadruplex, and group housing designs. These designs are intended to achieve net densities approximating those achieved in medium rise apartments, but with features more characteristic of conventional low density housing. The report provides detailed discussion and illustration of the site plan and of each proposed housing type. It includes a section concerning utilities and site servicing (sanitary and storm sewers, watermains, roads and parking)and provides detailed estimates of servicing and construction costs. The report's conclusions assert that the proposed development could achieve much higher densities with attendant significant savings on land costs without sacrifice of accepted standards of public open space or "livability on a neighbourhod scale," and thus demonstrates the building industy's ability to produce such housing if conventional zoning and site servicing impediments were removed.

Joint Venture for Affordable Housing. Affordable housing. A HUD USER bibliography. Germantown, MD: HUD USER/United States Department of Housing and Urban Development, Office of Policy Development and Research, October 1982. [MTL-MR: 016.3635 U543]

--60 pages. A bibliography of materials available through the HUD USER data base. Materials are presented in four sections: 1. streamlining procedures and deregulation, 2. site development and planning, 3. cost-saving technology, and 4. general costs (both general treatments, and treatments of other issues such as finacing or cooperative housing). Each entry is listed with an abstract. Cross-lists of personal and corporate authors are appended. The bibliography includes a few promising resources not available in Toronto; see my final section, "Potential resources not seen", where these are listed with HUD USER access codes.

Jordan, Wendy A. "Project of the month: don't follow the yellow brick road." Builder 7 (May 1984), 176-79. [OMH: Periodicals.]

--Description of an imaginative and well designed development of single detached houses in Dallas, aimed at first home buyers.

Jordan, Wendy A. "Project of the month: houses crack the cost code." Builder 7 (December 1984), 91-93. [OMH: Periodicals.]

--A development of small (800 sq.ft.) houses in San Francisco, with construction costs 40% below usual, and aimed at a market of lower middle income buyers.

Judd, Bruce, and John Dean, eds. Medium density housing in Australia. Red Hill, A.C.T.: RAIA [Royal Australian Institute of Architects] Education Division, 1983. [ARCH: NA 9051.4 M42 1983]

--127 pages. A comprehensive treatment of medium density housing issues in Australia, from the need for such housing to housing design to assessment of its human impact. The book is a collection of articles arising out of workshops across Australia conducted by the RAIA, under the headings: 1. design philosophy, 2. planning issues (detailed assessments of current and projected use in three Australian cities, and regulatory impediments and process), 3. the developer (developers' perspectives on cost and marketing), 4. infill housing, 5. behavioral research and user feedback (general research concerning density and well-being, specific research on perceptions of quality of medium density housing, and a user study in Sydney), 6. privacy and noise control, 7. management issues (problems of managing medium density developments after construction), 8. the public sector (case studies of publically owned developments), and 9. the private sector (case studies of developments constructed by the private sector). The book's many contributors, large size and dense print make its 127 pages a good source of much information on current housing developments in Australia and of critical reflections on them.

Lemov, P. "On the road again." Builder 7 (March 1984), 82-89. [OMH: Periodicals.]

--Innovations in size, design, financing and marketing of mobile homes, especially the "upper end of the product line"--mobile homes with pitched roofs, wood siding, added decks and garages--and innovations in site design for mobile home communities. Photographs demonstrate innovative designs.

Lemov, P., and Leslie E. Stockman. "First choice." Builder 7 (September 1984), 88-101. [OMH: Periodicals.]

--Seven attractive and low cost townhouses/semi-detached developments are described, and presented as appropriate first housing purchases.

Mosena, David R. "Downsizing gracefully." Planning 50, no. 1 (January 1984), 9-13. [OMH: Periodicals.]

--A useful and well presented review of recent trends toward affordable housing in the U.S. A brief introduction points to changing markets and widening gap between median incomes and housing prices, and indicates a trend toward less restrictive zoning practices. The incentive zoning experiment of Riverside County, California is described in detail (reduced densities allowed for developers' compliance with an affordable pricing formula and a design review process), and its mixed results. Another experiment in San Antonio is set out (simple reductions in mandatory lot size). The article closes with an argument for the strong necessity of good lot and dwelling design to counter negative effects of density and "entrenched

neighborhood resistance" to new housing of higher densities.

National Association of Home Builders. Land development 2. Washington: National Association of Home Builders, 1981. [ARCH: NA 9030 N27 1981; MTL-MR: 711.58 L126 1981]

--442 pages. A completely revised edition of NAHB's Land development, reflecting more recent conceptions of site and unit planning. This manual describes all aspects of land development for housing projects--market research, site servicing, roads, unit and site design, landscaping, the development process (zoning and regulatory procedures, project management, and taxes)--and addresses throughout the goals and findings of NAHB's Cost Efective Residential Standards program. It summarizes in each section desirable innovations (for example, innovative zoning or reduced street design standards), and presents brief descriptions of cost-effective unit and site designs.

New Jersey Department of Community Affairs/Tri-state Regional Planning Commission. Affordable housing handbook. Trenton, N.J.: New Jersey Department of Community Affairs, June 1982. [MTL-MR: (microfilm) FILM F A252; NTIS]

--70 pages. A general handbook in six sections: 1. attitudinal constraints (addressing fears that affordable housing is of lower quality or will reduce property values); 2. minimizing land costs (land banking, incentive zoning, rehabilitation of existing structures, land leases); 3. the cost of land use regulation; 4. reducing improvement costs; 5. construction costs; 6. making home ownership affordable (government interventions in financing, mortgage terms or interest). Sections 3 to 5 are most relevant. Section 3 provides an introduction to land use regulation impediments to affordable housing, and briefly reviews possible regulatory responses: municipal master plans setting priorities before the enactment of zoning laws; energy conservative site design requirements; inclusionary zoning; permitting mobile or manufactured housing; practical improvements to development review procedures (pre-application conferences, co-ordinated multi-agency reviews, clear guidelines for developers). Section 4 discusses means of lowering costs of site development: higher densities and more effecient site design to reduce costs of servicing, reduced street and sidewalk standards, "improvement bonds" (tax-free means of passing site improvement costs to home-buyers, which do not require large outlays of capital by the developer and which ultimately save home-buyer costs), direct public subsidy of servicing costs. Section 5 presents three approaches to reducing construction costs: i. smaller, simpler units; ii. more efficient construction (mobile or manufactured or component housing, "optimum value engineering" [HUD's OVE manual], optimum trade-offs between construction for energy-efficiency and for lower cost); iii. re-use of existing structures. The handbook's format is interesting: general ideas are presented in one column, and in a parallel column examples from all over the U.S. illustrate the ideas.

Nolon, John. Affordable housing. Public and private partnerships for constructing middle and moderate income housing. White Plains, N.Y.: Center for Community Development and Preservation, 1980 (reprinted 1982). [MTL-MR: 338.43363 N58]

--96 pages. Intended as a general resource for lower-cost and more efficient housing, which summarizes a wide range of innovations and possibilities in all aspects of the production and financing of housing. Chapter 1: introduction. Chapter 2: the availability and acquisition of land and structures (infill, adaptive re-use of existing structures, zoning open land areas for affordable housing, innovations in land acquisition). Chapter 3: costs of construction and capital improvement (cost-effective building types [townhouse, garden apartmenmts, etc.], building codes, manuafactured housing, energy efficient codes and construction). Chapter 4· financing and taxation (innovations in mortgages and taxation). Chapter 5: the role of the public sector (political process in the acceptance of affordable housing, streamlining regulations). This book is well-detailed and wide-ranging, but is a summary of ideas presented more thoroughly in other sources.

Office of Appropriate Technology, State of California. The affordable housing book. Strategies for the eighties from the California Affordable Housing Competition. California: Office of Appropriate Technology, 1982. [MTL-MR: 363.50979 S17]

--103 pages. A report of winning entries in OAT's 1981 Affordable Housing Competition, which sought entries in categories of design proposals, proposals to cut regulatory costs, and "new possibilities." OAT's engineers ran computer evaluations of energy efficiency and long-term savings of all designs, and a multi-sector jury selected 28 winners. Winning ideas are reported in four sections: 1. "making money cheaper" (reducing financing costs for builders and buyers, and finding new ways to involve government money); 2. "changing the rules of the game" (regulatory reform and zoning changes, and detailed reports of many local government innovations in California); 3. "do it yourself, with others" (housing cooperatives, community projects and collective self-reliance); 4. "affordable housing by design" (space analyses, energy efficiency, new housing forms, methods and materials). The book provides a well- detailed general discussion in each of these categories, interleaved with brief reports of the innovative programs and proposals which won awards.

Porter, Douglas. "Home builders advance on affordability." Urban Land 41 (October 1982), 6-13. [OMH: Periodicals]

--a useful extract of Douglas Porter, Affordable housing: twenty examples from the private sector (listed imediately below). Twenty successful affordable housing projects were chosen for detailed case studies in 1981 by the Urban Land Institute, and their successes analysed. This extract briefly discusses financing innovations, changes in types of units, changes in site design and amenities, successfully focussed marketing, and governmental support.

Porter, Douglas R. and Susan Cole. Affordable housing: twenty examples from the private sector. Washington: Urban land Institute, 1982. [MTL-MR: 728.10973 P59]

--106 pages. A description of twenty affordable housing developments built in the U.S. by private developers operating in the free market without any direct subsidy of public funds. An introduction provides a brief analysis of changing housing needs and housing supply, the various elements of housing costs, and means of reducing those costs. An overview of current "private market approaches" sets out common techniques used by developers to reduce housing costs (smaller houses on smaller lots, higher densities, alternate housing forms, reduced amenities, accurate market targeting, and design tailored to market preferences). A similar overview of local, state and federal government programs and actions is provided. A summary description of the twenty development projects is given, with tables analysing development cost factors and owner carrying charges. The bulk of the book reports in detail twenty projects from around the U.S. and from communities of varying sizes, each of which shows common characteristics: prices lower than local norms for new single-family homes; a conscious attempt to achieve afforbability; "a reasonable standard of quality in site design, construction and appearance;" no use of direct government subsidy; and recent market feasibility. While quality of design was a criterion of assessment, the projets were chosen primarily because they are representative of current private developers' design priorities and preferences for affordable housing. Each project is reported under the headings: affordability factors (features which were chief contributors to low cost), the community (locale and character of the development), the market (market target and marketing techniques), the development (under subheadings of location, site plan, appearance and amenities, units, construction details), financing, public regulation (procedures necesary to attain approval), and the development team. Site and unit plans and photographs are provided for each development.

Schnidman, Frank, and Jane A. Silverman, eds. Housing. Supply and affordability. Washington: Urban Land Institute, 1983. [ROBA: HD 7293 H7823 1983; MTL-MR: 363.50973 H59455]

--262 pages. A collection of papers selected by the ULI focussing on housing supply and financing of affordable housing. The scope of the collection is broad, but articles in several chapters are relevant. See for example Robert C. Lesser, "The future of housing depends on adaptable builders" (67-70), Richard I. Garrigan, "Multifamily properties: an attractive investment..." (71-76), David E. Dowell, "Reducing the cost effects of local land use controls" (81-90), Bernard J. Frieden, "Allocating the public service costs of new housing" (111-116), seven articles in chapter 5 addressing cost saving reform of government regulations and procedures (165-210), and HUD, "Housing cost reduction demonstration" (213-216).

Skogstad, Judy, and Ismael Mascayano. Design principles for small lot developments. Vancouver: District of North Vancouver Planning Department, February 1982. [PPDB (photocopy); ICURR: BG 078]

--4 pages. Very brief description and illustration of design objectives and preferred design features of small lot detached housing, set out by the District of North Vancouver. It is not clear from the publication whether these features are required for project approval, or only suggestions to improve habitablity.

Tomioka, Seishiro, and Ellen Miller Tomioka. Planned unit developments. Design and regional impact. New York: John Wiley and Sons, 1984. [ROBA: HD 257 T65 1984]

--192 pages. This book is intended as a review of some existing well-designed PUDs [planned unit developments], a comprehensive discussion of development issues (design, zoning, and assessment of community impact), and an advocacy of the potential of PUDs as an excellent approach to housing development. The first section presents a detailed analysis of an award-winning PUD in Massachusetts, and illustrated descriptions of six other American PUDs of diverse location and scale. Other sections analyse basic features of PUDs (characteristic designs and zoning ordinances), the "PUD process" (stages of development from design through the regulatory process), and assessing the larger scale regional impact of a PUD. Final chapters set out the results of a U.S.-wide survey of regional and municipal planning agencies concerning experiences with PUDs, and suggest ways in which to improve zoning ordinances affecting PUDs. The last section is a summary of the authors' analysis of the disadvantages and advantages of PUDs, and a prospect of future applications of the concept. Throughout the authors seem more concerned with PUDs as attractive and environmentally sound living arrangements than with PUDs as cost-efffective housing developments.

Urban Land Institute. The affordable community: adapting today's communities to tomorrow's needs. Report of the Council on Development Choices for the '80s. Washington: Urban Land Institute, 1982. [OMH: 711.4 C855]

--Report of the Council on Development Choices for the '80s, convened by the ULI and HUD to address development and revitalization issues in a broad context of social, economic and environmental change. The report provides an overview of the ULI's conception of appropriate development of urban and suburban space. Affordable housing, achieved by design and regulatory reform, is one important focus of the report, but current ideas are only briefly summarized. The strength of the report is its attempt to put the need for affordable housing into a wider context of urban development and the shape of well functioning communities.

Urban Land Institute. Development choices for the 80s.

Council on Development Choices for the '80s, Interim Report. Washington: Urban Land Institute, December 1980. [OMH: 711.4 U725]

--See description of its final report: Urban Land Institute, The affordable community (immediately above).

Vance, Mary. Housing costs: a bibliography. Architecture Series: Bibliography A-781. Monticello, Ill: Vance Bibliographies, August 1982. [PPDB. (photocopy); ICURR: HA076]

--13 pages. This is not a useful resource. The bibliography is unanalysed, and includes materials on widely ranging housing cost topics, from regulatory reform to financing. It is also incomplete, since generated only from key words such as "cost" and "price."

Vancouver City Planning Department. Housing families at high densities. Vancouver Planning Department, 1978. [OMH: 711.409711 S739]

--120 pages. Subtitled "A resource document outlining needs, principles and recommendations for designing medium and high density housing for families with young children." The book sets out the City of Vancouver's site and structure guidelines, not concerning more standard criteria such as unit placement and sunlight, but concerning elements of design that affect perception of density and the living characteristics of developments of higher density, particularly those built for lower income families with children. Part 2 is an introduction to the needs of families in higher density housing, and Part 3 is an introduction to relevant elements of site and unit design. Part 4 is a discussion of the development potential of districts of the City of Vancouver. Parts 5 and 6 are detailed and practical checklists concerning site and unit design (site design under the headings "project size, community identity/social mix, privacy and territory, open space, circulation, children's spaces, services and maintenance"; unit design under the headings "meeting the needs of privacy and household identity, facilitating child care, private outdoor space, unit interiors [various functional areas discussed separately], storage, and facilitating unit maintenance.") Part 7 provides a brief example of a Vancouver development which meets these guidelines. Part 8 addresses the cost of incorporating these design guidelines into housing developments, through two studies. The first study provides a cost analysis of three hypothetical 60 unit developments (two standard adult oriented developments, and the third unit incorporating the guidelines), and the second study analyses three alternative "fully developed designs" for one actual building site. Study results are thoroughly analysed and set out in useful ways (for example, one table analyses costs by design category, and other tables compare high-cost, lower cost and no-cost alternatives). The bibliography cites many studies (user-surveys and others) of livability criteria of high density housing.

Ville de Montreal, Service de l'Urbanisme. Operation 10 000 logements. 7 vols. Montreal: Ville de Montreal, Service de l'Urbanisme, September 1979 - December 1981. [ICURR: HC 176, docs. 1-7]

--Approximately 250 pages in total. A report of the City of Montreal's project to encourage construction of housing units in the city core (infill). The first volume sets out policy objectives and areas of potential renewal; other volumes provide detailed accounts of various potential sites for redevelopment, for which developers may submit housing proposals. This project is of some interest since 1. the housing units were to be built by private developers with only minimal government incentive; 2. the units were to be for families and persons of middle income; and 3. some of the areas under consideration were large enough to allow the construction of many units (and thus were "infill" only in a larger sense). However, because the focus of the reports is the process of urban renewal and the deliniation of potential sites for new housing, there is almost no information concerning the types of housing built, or data concerning site design or selling price. [See also Desautels, Aime, "Operation 10 000 logements," entered above].

--------. "Regulatory reform: municipal representatives speak on deregulation." Municipal Counsellor 30, no.4 (July/August 1985), 11-14. [PPDB (photocopy); OMH; ICURR]

--Three interviews with local officials of various communities in Alberta. Only the interview with Calgary Alderman Bob Hawkesworth touches on housing. Hawkesworth describes Calgary's efforts to improve regulatory procedures: one-site servicing, a municipal employee assigned to co-ordinate and facilitate the entire application process of complex developments, a building code review committee to assess applications for exemptions to code, one planner assigned to one complex zoning reassignment approval.

Bair, Frederick J. Jr. Intensity zoning: regulating townhouses, apartments, and planned developments. American Society of Planning Officials, Planning Advisory Service Report 314, February 1976. [OMH: 309.2606 A512 R.314]

--39 pages. A very detailed attempt to develop and explain LUI--Land Use Intensity--as a non-Euclidian [non-standard] zoning technique. The concepts of LUI had been developed elsewhere by the U.S. Federal Housing Administration (this report cites HUD's Minimum Property Standards, vols 2 and 4), but this report attempts to present LUI concepts clearly and to develop a model ordinance with commentary. LUI's innovations include density control without design straightjacket, building spacing related to window orientation rather than lot line, and minimum requirements of open space, "livability" space (landscaped pedestrian space) and recreation space. Part II gives a detailed analysis of "elements of the control system" (land-use intensity scales, methods of computing acceptable density/open space ratios and so forth). Part III discusses variable LUI scales in various urban contexts, from an isolated small community to a central section of a major metropolis. Part IV sets out a model ordinance based on LUI (with commentary on many sections), whose intent is to make LUI simpler, more understandable and easier to apply than in its earlier forms.

Bens, Charles. "Untangle red tape to bring down the cost of housing." Civic Public Works December 1984, 20-21. [PPDB (photocopy); OMH; ICURR]

--Report of recent innovations instituted in Canadian and American cities to speed developments through approval processes. These innovations are desirable both because they reduce costs to developers and because they increase revenue to the cities since more construction is approved. Reforms to the regulatory process include: locating several municipal approval agencies in one place where all aspects of a project may be approved at once (Ottawa) ; evening office hours to make application processing more accessible (Toronto); advance scheduling of inspections to reduce delays to developers;

review committees for larger projects involving all responsible municipal staff, to reduce delays and achieve agreements among developers and all departments involved; building inspectors trained in more than one area, so that, for example, one inspector can approve plumbing and electrical installations (Hamilton; Miami, Florida; in Miami this innovation reduced operating expenses by $100,000 per year and increased the city's revenue potential through construction licenses and permits by 10%); inspectors "on line" through hand held computers (Virginia). Other "obvious" but seldom followed improvements are suggested: simplified and standard reporting forms, pre-development meetings with developers, and one planner assigned exclusively to each major project. The article also discusses very briefly some reduction of site design standards and building codes (but includes no ideas not better reported elsewhere), and points to an international trend toward the establishment of building research centres and the testing of cost-effective construction methods (noting especially the manufactured housing industry of Japan).

Burchell, Robert W., and David Listokin. "The impact of local government regulations on housing costs and potential avenues for State meliorative measures." in George Sternlieb et al. America's housing: proposals and problems. New Brunswick, N.J.: Rutgers University Center for Urban Policy Research, 1980, pages 313-358. [OMH: 301.54 A512]

--The article falls into two parts. Part 1 details the housing costs of "excessive" government regulation (regulations which specify standards above basic levels necessary for health, safety, and welfare of of housing consumers). Costs at both the development and construction stages are assessed, and it is concluded that removal of excessive regulations would reduce the cost of new housing by approximately 15%. Part 2 examines possible State-level actions to improve or control local government housing regulation and reduce housing cost (particularly in the development of model zoning ordinances and policy coordination). This article is very specific to its American context, but provides a clear and detailed overview of then-current regulatory impediments to affordable housing, and of State government attempts to reduce administrative housing costs. This article, or a version of it, also appears in Annette Kolis, ed. Thirteen perspectives on regulatory simplification (see entry below).

Burchell, Robert W., and David Listokin. "Design standards in developing areas: allowing reduced cost housing while maintaining adequate community development standards." in George Sternlieb et al. America's housing: proposals and problems. New Brunswick, N.J.: Rutgers University Center for Urban Policy Research, 1980, pages 359-418. [OMH: 301.54 A512]

--This paper analyses zoning, subdivision, and environmental design requirements and standards which add unnecessary costs to new housing, and explores alternative government policies which will ensure both adequate community design and provide minimum-price shelter. The article is

divided into five sections. Section 1 is an introduction and overview. Section 2 presents a survey and comparison of existing municipal standards and standards proposed by trade associations or professional groups. Section 3 discusses potential policy measures to combat over-restrictive and cost-inducing design requirements and provides an extensive checklist for the assessment of existing policies and ordinances. Section 4 provided examples of existing policies of the sort recommended in section 3. Section 5 provides an extensive annotated bibliography focussing on design requirements and housing costs.

Central Naugatuck Valley Regional Planning Agency. Least cost housing: minimizing the fiscal impact of zoning and subdivisions regulations. Waterbury, Connecticut: Central Naugatuck Valley Regional Planning Agency, 1978. [MTL-MR: 352.961 C25]

--79 pages. An analysis of local government regulations affecting the cost of single family dwellings in a region of Connecticut, and recommendations for changes to regulations to allow least cost housing. The rport focusses mainly on regulations governing minimum floor areas and site servicing standards, and provides recommendations for altered zoning and altered standards. Collection and assessment of data on regulations and induced costs is thorough and detailed.

Dale-Johnson, David. Greater Vancouver Regional District land use regulation study: An evaluation of the land use approval process in Coquitlam, Surrey and Vancouver, 1979. Ottawa: Economic Council of Canada, Working Paper no. 15, January 1981. [OMH: 711.14 D139]

--Approximately 170 pages. A detailed economic analysis and comparison of land use regulations in three cities of the Greater Vancouver Regional District. The focus of the paper is both theoretical (addressing, for example, methodological problems of assessing economic impact of regulations and comparing diverse sets of regulations) and practical: it assesses the costs and effectiveness of three sets of regulations which have different approaches to common goals and are reflective of various historical stages of the evolution of land use control in B.C., and proposes specific recommendations for each city to reduce regulatory costs to developers and governments. This report is intended as an exhaustive study of the regulations of the three municipalities and also B.C. enabling legislation, and is therefore very specific to the contexts it addresses.

Derkowski, A. "The effects of planning controls on housing prices." Paper presented to Symposium on Urban Land, Canadian Council on Social Development, November 1976. [CUCS]

--26 pages. A widely ranging assessment of government induced costs of lots, and their effect on the price on new housing. Part 2 presents economic data and analysis. Part 3 describes the system of development controls, and the motives

behind the various courses of action pursued by the provinces, municipalities and the public. Part 4 analyses market effects of controls. Part 5 presents potential solutions to lower government induced costs: land banking, changes in institutional and tax structures, and--most relevant to the concerns of this bibliography--a recommendation that municipalities themselves provide lot servicing. *Instead of* imposing lot servicing standards on developers (who then pass on costs of servicing to consumers) it is recommended that municipalities themselves service lots through tax revenues, because this will potentially lower costs in three ways: municiplaties can borrow money at lower than mortgage rates; reduction in front-end capital requirements of developers means smaller building firms can remain competitive; and if municipalities bear the cost of meeting their servicing standards they will have much more incentive to avoid excessive "gold-plated" standards now imposed on developers.

Feldman, Lionel. Municipalities and housing design: a review of decision-making. Ottawa: Canadian Housing Design Council, 1975. [PPDB. (photocopy); ICURR: HH 239]

--19 pages. A paper addressing the role of municipal regulation in the control of housing design (chiefly site design). Three tasks are undertaken: 1. a brief review of legislation across Canada relevant to design control; 2. two detailed case studies of Ontario municipal legislation (the Boroughs of Scarborough and Etobicoke); a brief discussion of conclusions, "where do we go from here?". Feldman is more concerned to show how the legislative process works than with specific recommendations; his conclusions lament the uniformity of new housing and suggest that municipal design legislation has had the effect of stifling innovation, but he proposes no alternatives.

Fletcher, Bob. "Canada's pressing need for regulatory reform." Canadian Housing 2, no. 2 (Summer 1985), 54-57. [PPDB (photocopy); OMH; ICURR]

--Fletcher, Director of Communications of the Canadian Home Builders' Association, signals CHBA's awareness of the development costs imposed by excessive regulation, and of innovative and cost-saving regulatory reform under way in the U.S. which has been spurred by local industry and citizen's groups and sponsored by NAHB and HUD. In the absence in Canada of a similar "grass-roots" reform movement, Fletcher reports CHBA's recommendation of "a national effort to collect and disseminate information about municipal innovations in areas such as planning and zoning" which would reduce housing development costs. Fletcher argues that this effort should involve the full participation of municipal governments and could be achieved through the Federation of Canadian Municipalities.

Gabor and Popper Architects, and W. G. Anderson Planning and

Research. THBA [Toronto Home Builders' Association] Renovator's [sic] Council. Zoning impact study. Gabor and Popper Architects, and W. G. Anderson Planning and Research, March 1982. [CUCS]

--68 pages. The study outlines a typical residental block in the City of Toronto, and shows the variances to current zoning required for various renovations or alterations or changed use of existing dwellings, and variances required for a "well-designed" new house. Alterations to zoning laws are proposed on the basis of these case studies. Because almost all the case studies concern changes to existing housing, and the one new dwelling discussed is designed to be very similar to existing housing, this study's applicability is minimal.

Goldberg, Michael, and Peter Horwood. Zoning: its costs and relevance for the 1980s. Vancouver: Fraser Institute, 1980. [OMH: 711.5 G618]

--133 pages. A detailed and comprehensive book advocating the dismantling of current governmental zoning practices, and replacing them with less direct governmental controls and what the authors call "private" zoning--market forces leading to rational and effective land use. Any sort of public zoning is viewed as an impediment to good land use: older forms of rigid zoning did not meet achieve the goals it intended and more recent alternative forms (PUD, performance zoning) with their flexibility become arbitrary, disordered and equally ineffective. The authors propose instead of zoning the use only of indirect governmental land use controls (the location of main roads, sewers and other utilities, recreational facilities), and a clear process of approving developments (well-defined and uniformly applied rules for limiting acceptable characteristics of any development). Chapter 1 provides an introduction and review. Chapter 2 describes the history and diversity of zoning laws. Chapter 3 sets out a debate on the merits and demerits of zoning. Chapter 4 reports studies confirming the ill effects or non-effectiveness of zoning ordinances. A large appendix to chapter 4 details the positive example of Houston, Texas which has no zoning laws but controls development through the instruments advocated by the authors. Chapter 5 sets out Canadian evidence (Vancouver from the 1960s to early 1970s), and chapter 6 suggests reforms and alternatives. Final appendices provide detailed statistical and graphic analyses of the effects of zoning.

Griggs, Neil and Associates, and Richard Hulbert and Partners. Institutional impediments to the construction of detached small lot housing. Ottawa: Canada Mortgage and Housing Corporation, January 1984. [CUCS]

--47 pages. A study arising out of experience with the HUDAC (Housing and Urban Development Association of Canada) Triple "A" demonstration house in Vancouver. HUDAC believes there is a market for alternative small lot housing in Canada which is not being catered to, so wished to explore "institutional attitudes" to the sort of small lot subdivisions which would accomodate such houses. This study addresses three

questions: 1. whether a small lot can accomodate an average sized house and still allow adequate space for open space, privacy, parking, and other desirable site characteristics; 2. whether site planning criteria have to be traded off to provide such subdivisions; and 3. what changes at an institutional level (zoning, site regulations, attitude) are required to develop such housing.

The report provides a brief overview of the governmental regulatory process (subdivision controls, zoning and building controls), then a detailed description of municipal regulations in four B.C. communities for detached housing and specific regulations for small lot housing. The authors conducted surveys of municipal officials to determine the criteria used to assess small lot development and the process by which these criteria were selected, and report conclusions: that small lot criteria continue to be patterned on existing (larger) residential zones, that lot sizes have reached the limit of reduction unless alternative site regulations are developed, that current zoning regulations and clearances effectively determine house form and leave little room for innovation.

The report then sets out 5 innovative house and lot designs which use 30-50% less land than required by the existing municipal small lot regulations and ignore zoning criteria of density, lot areas and set backs, but which do "respect site planning criteria of privacy, open space, parking, safety, etc."

The final section sets out conclusions and recommendations. Minicipal oficials continue to perceive small lot subdivisions as scaled down standard single family detached housing, so a reconception of such housing as "detached town houses" (with attendant changes in expectation of lot size and design flexibility) is required. Regulations regarding minimum lot size and clearances need to be altered and a much greater regulatory emphasis placed instead on building and site planning criteria such as building heights, fenestration, and open space. It is claimed that the suggested lot designs or other alternative lot designs would not violate CMHC site planning criteria, but regulation of such lots would require more careful assessment and coordination with these criteria.

Hershey, Stuart S., and Carolyn Garmise. Streamlining local regulations: a handbook for reducing housing and development costs. Management Information Service Special Report No. 11, May 1983. [OMH: 711.4 H572]

--60 pages. Information concerning possible regulatory reforms encouraging affordable housing (alternative zoning, infill development, manufactured housing, subdivision standards and building codes), and advice concerning initiating reforms and streamling the regulatory process. The report is largely a survey and summary of ideas developed elsewhere, but is a valuable resource because practical, detailed and comprehensive. An appendix describes a Land Development Guidance system--a "performance zoning" innovation--in use in Fort Collins, Colorado.

Howard, Ronda. "Affordable housing. What do other cities do?" City of Vancouver Planning Departmewnt Quarterly Review 12 (July 1985), 9-11. [CUCS]

--A brief review of municipal programs to increase stock of affordable housing in San Francisco, Seattle and Toronto, and a comparison with Vancouver's programs. Focus is put on 1. inclusionary zoning and flexible incentives to developers as components of inclusionary zoning, and 2. co-ordination of policies with higher governmental funding.

Hulbert, R. E. and Partners. Compact housing. Zoning bylaw criteria. Vol.1, Attached housing. Vol. 2, Detached housing . Vancouver: Greater Vancouver Regional District Planning Department, May 1980. [ICURR: HH 090]

--Vol. 1, 20 pages; vol. 2, 22 pages. Description of housing and site designs which meet GVRD's zoning regulations for compact housing (vol. 1 provides a more involved discussion of site plan). Each criterion is reported with a statement of intent, performance criteria, and suggested guidelines. Criteria are given for all aspects of site and unit design, and habitable qualities such as privacy and noise control are addressed by criteria for hard design elements such as yards and windows. The criteria reflect GVRD's research and promotion of compact housing as a lower cost alternative to traditional subdivision standards.

Kendig, Lane, S. Connor, C. Bird, and J. Heyman. Performance zoning. Washington: American Planning Association, 1980. [OMH: 711.5 K33]

--360 pages. A comprehensive explanation of performance zoning, which does not zone by restricting districts to specific anticipated uses (Euclidian or conventional zoning) but by setting minimum "performance" standards which must be met by any use of that land. The first section sets out the need for this alternative, and gives an account of its development in American experiments. The application of performance zoning to specific contexts, including housing, is described. Performance zoning allows many different housing development designs under one set of regulations, and thus encourages alternative and more cost-effective site designs. Section 2 details a model performance zoning ordinance prepared for Lake County, Illinois.

Kolis, Annette, ed. Thirteen perspectives on regulatory simplification. Urban Land Institute Report no. 29. Washington: Urban Land Institute, 1979. [MTL-MR: 342.7306 T34]

--144 pages. A collection of papers presented at a ULI seminar on regulatory simplification on February 1978, presented in three sections: 1. conceptual overview (general issues concerning regulatory reform, addressed by papers from legal, development and environmental perspectives); 2. implemented solutions (papers describing five already

implemented exemplary reform techniques at state, local and federal levels); 3. proposed solutions (papers proposing reform from developers' perspectives, describing methods of encouraging and implementing local regulatory reform and simplification, exploring possible state-level reforms, and--as a provocative closing piece--proposing an elimination of permitting requirements). This is an important analysis of the issues and a thorough and well-documented exploration of solutions by prominent planning analysts, directed to a professional audience.

Longhini, Gregory. "How three cities fared in one-stop permitting." Planning 44 (October 1978), 31. [OMH: Periodicals.]

--a brief report of three innovative programs to reduce administrative delays (two successes and one failure). This article is similar to, and possibly a summary of, Gregory Longhini, "Streamlined permitting procedures" (see entry immediately below).

Longhini, Gregory. "Streamlined permitting procedures." PAS Memo 78-9 (September 1978), 1-4. [OMH: Periodicals (not found); MTL-MR: 711.4 A51 (must be retrieved from storage)]

--A report of four local U.S. innovations in reducing development delays through streamlined procedures (permits by phone and charge card; reduced numbers and standardization of application forms; central application centres), and of problems encountered in the streamlined procedures.

Mallach, Alan. Inclusionary housing programs. Policies and practices. New Brunswick, New Jersey: Center for Urban Policy Research, 1984. [ROBA: HD 7293 M26 1984]

--278 pages. This book is an attempt to assess the policy, programmatic and technical issues associated with inclusionary zoning ordinances (ordinances requiring developers to provide housing for low and moderate income groups or providing incentives to developers for such), and to assess U.S. experience with inclusionary housing programs through 1983. The book is wide ranging, thorough and critical, and a major resource for assessment of a major local government instrument for the provision of lower cost housing in the U.S. Much of it, however, will be of little application to the purposes of this bibliography, since in the most general terms "inclusionary zoning" means a strong governmental intrusion into housing development in ways not under primary consideration by this Starter Homes project (e.g. coercion of or strong incentives for low-cost developments; public subsidies). Part of chapter 3, however, focusses on housing cost reductions possible in site design, site servicing and construction methods (pages 57-70). Mallach's discussion of site servicing and design is brief and is better treated in many other sources, but his discussion of cost-effective construction is more extensive and more original. He compares cost-effective techniques of "stick-built" construction and

manufactured housing.

Mayer, Martin. "Builders and buildings." Chapter 10 in The builders. Houses, people, neighborhoods, governments, money. New York: Norton, 1978, pages 229-252. [OMH: 301.363 M468]

--This chapter describes the successful Dallas housing construction company of Fox and Jacobs. Much of the chapter concerns their construction techniques (see second entry for this chapter in Section 4, Housing unit), but Mayer notes that Fox and Jacobs build in a part of the U.S. which has virtually no mandatory design or amenity regulations. Beginning from this observation, Mayer notes that part of Fox and Jacobs's low cost derives from their total control over the features they include in their houses, and the remainder of Mayer's chapter criticizes excessive local governmental standards which add to the cost of new housing, and piles example upon example of regulations which are supposedly for the good of home buyers but only put housing out of their financial reach.

McAlister, G., and A. Theobald. Discussion paper on performance zoning and related techniques. Toronto: Ontario Ministry of Housing, Local Planning Policy Branch, October 1978. [ICURR: MF 048]

--19 pages. An overview of techniques of performance and impact zoning, and assessment of their advantages, disadvantages, and possible applicability under the Ontario Planning Act (recommendation: that performance zoning not be provided for in the Planning Act, but that a demonstration project would be useful).

McClendon, Bruce W. "Reforming zoning regulations to encourage economic development." in International City Management Association. Shaping the local economy. Current perspectives on economic development. (publisher and date not seen), pages 145-152. [PPDB (photocopy); ICURR: MG295]

--A brief description of zoning ordinance reform in Beaumont, Texas, which resulted in a less complex ordinance, reduced minimum lot size standards and other regulatory reductions, more flexible development assessment criteria (allowance of zero lot line, clustered buildings, performance standards, incentive zoning), landscaping bonuses (reduced lot size allowed if front setback landscaped), and streamlining improvements in the regulatory process.

Meshenberg, Michael J. The administration of flexible zoning techniques. Washington: American Society of Planning Officials, Planning Advisory Service Report no. 318, June 1976. [ICURR: RG 063]

--61 pages. This is a careful and thorough analysis of flexible land use regulatory schemes which came into use as standard "Euclidian" zoning no longer met the needs or problems of land use control. Its purpose is not only to describe more flexible zoning techniques, but to assess the dangers of

introducing more local government discretion in land use control and to propose criteria and administrative mechanisms to provide adequate safeguards in their use. Techniques discussed are as follows: planned unit development, special permits, floating zones (regulations governing a particular land use but not specifying a location), overlay zoning (two sets of zoning requirements applying to one area), conditional rezoning (rezoning with conditions imposed on developer), contract rezoning (with conditions binding both developer and community), incentive zoning, subdivision exactions (off-site costs of new developments assessed and charged to developers), and transfer of development rights (measures to compensate losses imposed by local governments on developers to protect land of historical or environmental value, by a "transfer" of development rights to other land). Each of these techniques is treated in a discrete chapter which describes 1. how the technique is used, 2. the standards used which allow or deny proposed developments and set limits to the regulators' discretion, 3. how the technique measures up to stated policies and objectives, and 4. whether the technique enhances or inhibits opportunities for low- and moderate-income housing. Introductory chapters provide a historical and analytical overview, and a final chapter assesses the techniques and provides recommendations.

Ontario Ministry of Municipal Affairs and Housing. Planning for mobile homes: a guideline. [OMH: 728.69 O61]

--40 pages. A resource for the development of municipal policies and regulations concerning mobile homes. All aspects of mobile home developments are addressed: location, servicing requirements, site planning criteria, zoning and site plan controls. A large appendix presents information concerning mobile homes and mobile home developments under the headings: form of tenure, types of communities, dwelling characteristics, construction standards, and municipal revenue. Another appendix reports and discusses Section 35c of the Ontario Planning Act concerning mobile homes.

Rahenkamp, Sachs, Wells, and Associates, American Society of Planning Officials, and David Stoloff. Innovative zoning: a local official's guidebook. HUD, Office of Policy Development and Research, November 1977. [OMH: 711.5 R147 (not found); ARCH: HD 205 1978 R35]

--28 pages. An introduction to alternative zoning concepts and ordinances, directed toward local governments faced with old zoning laws inadequate to new zoning needs. Chapter 1: why innovative zoning is needed. Chapter 2: potential benefits of innovative zoning (innovative zoning is less restrictive, more flexible, more open to creative solutions, and more open to public participation). Chapter 3 discusses a wide range of innovative zoning options, from small alterations of existing ordinances to completely restructured zoning laws. Flexibility responsive to local needs is encouraged. Chapters 4-6 describe various alternative zoning schemes, set out the intended objectives of these innovations and assess some actual

experience of the effects of the innovations: chapter 4, PUDs (assessment: have resulted in better design, but haven't lowered costs); chapter 5, incentive zoning (assessment: usually only works when developers offered distinct advantages); chapter 6, impact zoning, ranging from simple performance standards to complex assessments of community effects and projected community costs of proposed developments (assessment: most promising model, but requires good standards and strong administration to realize benefits to community). Chapters 7 to 11 offer practical advice concerning the assessment of local zoning needs, preferable alternatives, administering innovative zoning ordinances, and working with developers.

Rahenkamp, Sachs, Wells, and Associates, American Society of Planning Officials, and David Stoloff. Innovative zoning: a digest of the literature. U.S. Department of Housing and Urban Development, December 1977. [OMH: 711.5 R147d]

--53 pages. An extensive analysis of literature concerning alternative zoning practices (planned unit development, incentive zoning, impact zoning). Annotation of each source includes content summary, and evaluation of usefulness to various potential users (government officials, lawyers, developers, the public).

Rice Center, and Urban Land Institute. The cost of delay due to government regulation in the Houston housing market. Urban Land Institute Research Report no. 28. Washington: Urban Land Institute, 1979. [MTL-MR: 338.43 R37]

--92 pages. A detailed report of government regulation induced delays and costs in Houston. Part 1 presents research methods, and analyses the delays and their causes. Part 2 addresses methodological issues involved in calculating the costs of these delays. Part 3 compares construction times and housing costs in Houston for three periods, two of which occur "pre-regulation" and one "post-regulation," and on this basis analyses the effects of specific government regulations on various phases of construction projects. Part 4 discusses major delay-inducing regulations. Part 5 presents conclusions and recommendations. This report is very specific to Houston data, but attempts to provide recommendations generally applicable in the U.S.

Sanders, Welford. The cluster subdivision: a cost-effective approach. Chicago: American Planning Association, Planning Advisory Service Report Number 356, 1980. [OMH: 309.2606 A512 R.356]

--Provides discussion and examples of relevant zoning ordinances. See description in Section 3, Site design.

Sanders, Welford. Zero lot line development. Chicago: American Planning Association, Planning Advisory Service Report Number 367, 1982. [OMH: 309.2606 A512 R.367]

--Provides discussion and examples of relevant zoning ordinances. See description in Section 3, Site design.

Sanders, Welford, Judith Getzels, David Mosena, and JoAnn Butler. Affordable single-family housing. A review of development standards. Chicago: American Planning Association, Planning Advisory Service, Report Number 385, August 1984 [OMH: 309.2606 A512 R. 385]

--Includes a discussion of alternative site design standards developed in thirteen American cities. See description in Section 3, Site design.

Sanders, Welford, and David Mosena. Changing development standards for affordable housing. Chicago: American Planning Association, Planning Advisory Service Report Number 371, 1982. [OMH: 309.2606 A512 R.371]

--30 pages. Chapter 1 introduces practical alterations in development standards (less restrictive density and lot size regulations, parking standards, street and sidewalk dimensions). Chapter 2 provides detailed reports of efforts to revise development standards in four American sites. Each case study reports local background to the changes, the reform process, further reforms in progress, and "lessons learned."

Seidel, Stephen R. Housing costs and governmental regulations: confronting the regulatory maze. New Brunswick, N.J.: Center for Urban Policy Research, 1978. [OMH: 690.031 S458.]

--405 pages. A thorough analysis of the effects of government regulations on the cost of American housing. Regulations assessed include building codes, energy conservation codes, subdivision regulations, zoning regulations, and others. This book is often cited in bibliographies, and seems to be a definitive survey for the late 70s. Seidel's recommendatins for the reduction of standards are general, but express the direction of many subsequent treatments of the issues.

Smith, Thomas P., and Gregory Longhini. "New reports, ordinances and studies." PAS Memo, August 1981, 1-4. [OMH: Periodicals.]

--A report on then-new planning ordinances, some of which are relevant to reducing the cost of housing developments. Topics surveyed include mobile homes (especially ordinances allowing mobile homes on foundation systems on lots zoned for single family dwellings), impact fees (requiring developers to pay for services or facilities required by new housing or increased densities), and land development codes (integrating zoning, subdivision, environment and health standards into one ordinance).

So, Frank S. "Tips on cutting the delays of regulation." Planning 44 (October 1978), 26-30. [OMH: Periodicals.]

--A comprehensive review of ideas to streamline builders' ways through the regulatory process. Much of the discussion is general enough to be applicable to the Canadian context.

State of Connecticut Department of Housing. Housing and land use: community options for lowering housing costs. Hartford: State of Connecticut Department of Housing, November 1981. [MTL-MR: 363.50974 H594]

--Approximately 170 pages. A review of government policy tools for the encouragement of low-cost housing, whose main focus is zoning (chiefly inclusionary zoning, but other zoning issues are discussed). Other cost-inducing regulation is discussed (site servicing and site design regulations). This main section of the book is largely a summary of issues treated more thoroughly in other resources. An 80 page appendix provides extensive documentation of alternative zoning instruments of local governments across the U.S.

State of Connecticut Department of Housing. A model ordinance and model procedures for "one-stop" applications for the development of land. Hartford: State of Connecticut Department of Housing, February 1982. [MTL-MR: 346.74604 M57]

--50 pages. In order to conserve time and expense of developers and government officials, the State of Connecticut developed this model application and approval ordinance, recommended approval procedures, and attendant government agency re-structuring. The proposed ordinance is given in full, and the proposed procedures set out in summary with appropriate examples of required forms.

Tuccillo, John A., and Robert Dubinsky. Minimum property standards and local housing markets. Washington: Urban Land Institute, May 1982. [MTL-MR: (microfilm) FILM F T886; NTIS]

--55 pages. An investigation of the effect of United States Department of Housing and Urban Development's Minimum Property Standards (housing and site criteria imposed by HUD on housing eligible for FHA insurance) on the cost of housing. The investigation was focussed on the lower-cost end of the housing market, and on Minimum Property Standards which builders felt to be excessive and/or to raise the cost of housing. The report is very specific to American federal building and site standards. It assesses only the induced costs of the regulations, and makes no recommendations concerning the validity or potential alteration of these standards.

United States Department of Housing and Urban Development, Urban Land Institute. Reducing the development costs of housing: actions for State and local governments. Proceedings of the U.S. Department of Housing and Urban Development Conference on Housing Costs, August 1979. [OMH: 301.54 U72]

--275 pages. This is a report of a HUD Conference in 1979 whose goal was to find ways of reducing housing development

costs which arose from the public sector--constraints on the supply of land, procedural delays, and increased costs in meeting higher government standards, etc.--at any level of government. The conference was organized around five "workshops": 1. improving development standards in fringe areas (assessing governmental controls on land use, minimum lot sizes and clearances, housing types, street design, utilities); 2. increasing supply of land in fringe areas (urging a reconception of the governmental role in the supply of developable land); 3. improving central city development standards and increasing land supply (analysis of housing supply and value in cities, attempts to facilitate housing redevelopment of neglected or under-developed urban areas) ; 4. allocation of development costs (development costs imposed on developers, home buyers and taxpayers; implications of various redistributions); improving permitting procedures (analysis of administrative problems and discussion of alternatives). Each of these sections is concluded with a relevant bibliography, and an extensive well-annotated bibliography is found on pp. 139-166. The final section of the report summarizes the recommendations of the "workshops" and lists participants' responses to the recommendations.

Urban Land Institute Research Division, and Gruen, Gruen and Associates. Effects of regulation on housing costs: two case studies. Urban Land Institute Research Report no. 27. Washington: Urban Land Institute, 1977. [MTL-MR: 301.540973 U67]

--34 pages. An attempt to assess and document the effect on housing cost of government regulations concerning land use and environmental protection. A brief introduction precedes detailed case studies of two communities (San Jose and Jacksonville) which relate factors of increased government regulation, land supply, and market demand for housing to price increases from the mid-60s to 1976.

Vranicar, John, Welford Sanders, and David Mosena. Streamlining land use regulation. A guidebook for local governments. Chicago: American Planning Association, November 1980. [OMH: 711.14 A5125]

--A set of detailed practical suggestions for the streamlining of procedures of application under land-use regulation and assessment of these applications. All stages of application and review are discussed: pre-application, staff review, lay review (public hearings). Problems in setting out procedures both for routine cases and for cases requiring discretionary decision-making are addressed. Suggestions are made concerning how to initiate and design a program of reform. The concluding bibliography points to many very specific American experiments, but most of the discussion of the text is general and not tied to specific governmental contexts.

Weitz, Stevenson. Affordable housing: how local regulatory improvements can help. Washington: United States Department of

Housing and Urban Development, Office of Policy Development and Research, September 1982. [MTL-MR: (microfilm) FILM F W436; NTIS]

--19 pages. Part 1, "areas for action," briefly describes how local governments affect the cost of market housing, and actions to assist in cost reduction: raw land costs (increasing supply of developable land, spreading costs of roads and utilities, allowing higher density and flexible zoning, policies for resource lands), site improvement costs (lowering site standards and frontage requirements), construction costs (building codes), developer fees, administrative procedures (streamlining the regulatory process). Part 2, "accomplishing local regulatory improvement," describes the process of assessing need for change and accomplishing effective reform, and includes a discussion of "who does what" (tasks usually performed by given officials or organizations), a checklist for rating existing regulations, advice on "allaying the fear of change," and a draft housing demonstration ordinance.

Werth, Joel T. "Inclusionary zoning regulations: an update." PAS Memo, March 1980, 1-4. [OMH: Periodicals.]

--A report of then-new zoning regulations designed to encourage the construction of low- and moderate-income housing. The report describes several successful existing "inclusionary" ordinances, provides recommendations concerning the development of similar ordinances, and lists sources and contacts. Incentive ordinances are recommended (for example, allowing density bonuses or reduced development standards to developers who provide a set amount of low-income housing).

Wickersham, Kirk. "A lot more than just an ordinance: the Breckenridge development code." Urban Land 38 (January 1979), 9-13. [OMH: Periodicals.]

--an enthusiastic report of a model code and administrative process in Breckenridge, Colorado, which reflects innovations encouraged in Kirk Wickersham Jr. The permit system (see entry immediately below).

Wickersham, Kirk Jr. The permit system. A guide to reforming your community's development regulations. Boulder, Colorado: Indian Peaks Publishing, 1981. [MTL-MR: 352.96109 W37]

--219 pages. Its title might give the impression that this is only a handbook detailing a reform process. Instead this book is a strong critique of conventional zoning theory and pracice, and a thorough and well presented argument for the alternative "permit" system of performance zoning. It presents a wide ranging and detailed discussion of the theory and practice of a strongly alternative approach to land use regulation.

Zogby, Teresa. "Zero lot line development." PAS Memo 79-9 (September 1979), 1-4. [PPDB. (photocopy)]

--A description of the forms and purposes of zero lot line

housing, and a discussion of considerations in the regulation of zero lot line developments (techniques to incorporate such developments in existing zoning, and examples of property line, fenestration, and other conditions attached to zero lot line developments in various American communities).

SECTION 3: Site Design and Engineering

Aasen Associates. Site planning criteria for high density housing. Final report. Ottawa: Canada Mortgage and Housing Corporation, March 1983. [ICURR: BG 144]

--Approximately 275 pages. A detailed and careful assessment and revision of CMHC's Site planning criteria [see entry below], with special emphasis on the particular needs of high density housing: "the study attempts to produce a comprehensive and practical series of site planning proposals which reflect CMHC's current policy thrusts, appropriate professional norms, and current and anticipated high density housing trends and needs in Canada" (page i). Several means of assessment of criteria were employed, and are reported in appendices to the proposed criteria: a literature review, first-hand field research (including case studies of high density housing projects and their compliance with CMHC site criteria), and interviews with involved professionals. The report begins with a thorough introduction to planning considerations and the role of site planning criteria, and a description of the process which gave rise to the recommendations of the study. Part 2--the site planning criteria--is introduced with a discussion of the rationale and character the changes proposed to the CMHC criteria. Site planning proposals are then presented as a statement of intent, with discussion and requirements; their form and wording follow the earlier CMHC criteria, and proposed changes are indicated in italics. Six new criteria are proposed: energy conservation, community structure and housing mix, transportation services, landscape development, safety and security, and conversions. Criteria concerning comprehensively planned developments are also substantially revised (part 3). This is an important resource not only for its detailed assessment of specific CMHC site criteria but also for its general discussion of planning issues.

American Public Works Association Research Foundation. Urban stormwater management. American Public Works Association Special Report no. 49. Chicago: American Public Works Association, 1981. [MTL-MR: 628.212 U67]

--285 pages. A comprehensive design, assessment, and maintenance manual intended for a professional audience. Chapter 13, "costs of stormwater management systems," analyses all aspects of the cost (administration, land, construction, operation and maintenance) of alternative systems.

Canada Mortgage and Housing Corporation. Residential site development advisory document. Ottawa: Canada Mortgage and Housing Corporation, February 1981. [MTL-MR: 354.71008 R26]

--163 pages. An advisory document intended to "present a wide range of information concerning design and development of residentail subdivisions, to amplify Part 2 of CMHC's Site

planning criteria [see entry below], and to promote innovative and cost-saving development practices." Chapter 1 is a general discussion of the problems inherent in any attempt to cut costs and retain quality in residential development, and an overview of innovations in all phases of subdivision development that will help developers produce less expensive housing of acceptable quality. Chapter 2 is a more detailed treatment of considerations introduced in chapter 1, structured into sections addressing specific features of site design (dwellings, design for energy conservation, storm water drainage, open space, and so forth). Chapter 3 presents description and analysis of eight Canadian subdivisions built in the 1970s, each of which employed innovations and cost-saving techniques discussed in chapters 1 and 2. Descriptions of the projects are full and well illustrated, and an analysis of the merits and shortcomings of each project is provided. This is an important Canadian resource for the development of cost-effective and well designed subdivisions.

Central Mortgage and Housing Corporation. Site planning criteria. Ottawa: CMHC, September 1977. [OMH: 351.725 C397si]

--54 pages. CMHC's site design requirements for approval of housing financed under the National Housing Act. The requirements are intended to assure a minimum standard of site design to improve the quality of higher density, lower cost housing. The introduction sets out the purpose of the requirements and describes a typical process of site planning and site plan approval. Part 1 addresses the location of housing developments (soil suitability, adjacent land uses). Part 2 addresses site plan characteristics of the housing development as a whole (for example, provision of open space, adequate pedestrian and traffic patterns, utilities). Part 3 addresses lot plan characteristics of conventional housing (detached, duplex, semi-detached). Part 4 addresses in much more detail lot plan characteristics of comrehensively planned housing, under headings of separation space, individual and communal amenity (recreational) areas, outdoor living areas (areas adjacent to individual units for the private use of residents of that unit), communal roof decks, children's play space, requirements for housing of the eldely, parking, access to the unit, storage, refuse disposal, and exceptions to the amenity area criteria allowable in urban areas where alternative recreational facilities are available.

Central Mortgage and Housing Corporation. Site planning for mobile homes. Ottawa: CMHC, April 1973. [OMH: 351.725 C397SiM]

--A supplement to CMHC's Site planning handbook, addressing all standard aspects of site design, applied to mobile home developments.

Canada Mortgage and Housing Corporation. Stormwater management technology systems demonstration in the City of St.

Thomas. Canada Mortgage and Housing Corporation and Environment Canada, SCAT [Interdepartmental Committee on Sewage Collection and Treatment] Report no. 3. Ottawa: Canada Mortgage and Housing Corporation, November 1980. [OMH: 351.725 C397sto]

--212 pages. A research report concerning the evaluation of alternative storm water management systems for St. Thomas, Ontario, and recommended modifications to its then-current system. Though the report is focussed very closely on St. Thomas, its methods and conclusions are generally applicable. The report's authors attempt to generate a methodology applicable to storm water problems in other municipalities, and an appendix discusses Sarnia, Ontario. The report's objectives were to design modifications to an existing system to prevent three problems (storm water pollution, dry weather pollution and flood relief), but its conclusions are relevant to the design and servicing of new development: the report's analysis of solutions incorporates discussion of many alternative storm water management techniques, and cost-effectiveness is a major criterion of assessment.

Chambers, G. M., and C. H. Tottie. Evaluation of stormwater impoundments in Winnipeg. Canada Mortgage and Housing Corporation and Environment Canada, SCAT [Sewage Collection and Treatment] Report no. 1. Ottawa: Canada Mortgage and Housing Corporation, April 1980. [MTL-MR: 628.212 C34]

--80 pages. An evaluation of alternative storm water management systems in Winnipeg, which use on-site impoundments (artificial lakes) instead of conventional closed conduit sewering systems. The terms of evaluation were broad, including assessments of ecological considerations, efficiency and maintenance, safety, and social considerations (public health, aesthetics and recreation). The cost-effectiveness of the alternative systems was also evaluated. Conclusions of the evaluation are very positive: storm water impoundments are not only effective, safe, and of recreational benefit but also the least costly alternative for land drainage in Winnipeg.

City Council of Essex. A design guide for residential areas. Tiptree, Essex: Anchor Press, 1973. [OMH: 711.41 E78]

--135 pages. A design manual for site layout. The planning policies of Essex county are set out, followed by an extensive theoretical discussion of all aspects of good site design, and case studies showing unacceptable design features and suggested alternatives. Though developments of all densities are discussed, the predominant focus of the book is medium density housing. This source is a good summary of site design considerations to improve the livability and attractiveness of medium density housing, and presents effective alternative designs.

Featherstone, R. E., and A. James, eds. Urban drainage systems. Proceedings of the First International Seminar, Southampton, England, September 1982. [MTL-MR: 628.212 U665]

--Approximately 500 pages. Collected papers. Relevant topics include improved structural design of storm water management systems, and planning optimal layouts of storm sewer networks.

Federal/Provincial Task Force on the Supply and Price of Serviced Residential Land. "Lot servicing costs and standards." Chapter 8 in Down to earth. Vol. 2, Synthesis and summary of technical research. April 1978, pages 77-97. [OMH: 333.337 G815 v.2]

--This chapter investigates the contribution of lot servicing costs to the overall cost of land. Section D of chapter 8, "Differences in standards" (pages 87-95), compares two case studies of different storm sewer standards and costs: Scarborough, Ont. used conventional storm sewers at a cost of $71.00 per lineal foot in 1976, and experienced problems of basement flooding; Brampton, Ont. used innovative standards which allowed storm sewer construction at a cost of $21.25 per lineal foot in the same year, with better storm water management. The conventional standards and innovative standards are briefly described.

Gauch, Richard, J. Feldman, B. Patchan, J. Svatos, and D. Garfinkel. "Cluster: an old formula solves new problems." Builder 1 (August 1978), 23-38. [OMH: Periodicals]

--An article directed toward developers to encourage cluster housing construction. The article presents: the merits of cluster housing for residents; its advantages to developers in reduction of costs; advice concerning planning regulations and the regulatory process; discussion of potential markets; explanation of the maintenance of common space through home owner associations. Approximately ten attractive and well designed cluster developments are described and illustrated.

Helliwell, P. R., ed. Urban storm drainage. New York: John Wiley and Sons, 1978. [ENG: TD 665 U69; MTL-MR: 628.24 U67]

--727 pages. Collected papers of an international conference held at the University of Southampton, England, in April 1978. The editor stresses the importance of research presented in these papers for design and development of more cost-effectivce and efficient storm water management systems. Topics addressed include the prediction of storm water levels, evaluatin of modela and methods, storm water management case studies, "costs and benefits" (methods of reducing costs and assessing costs of proposed systems), and various technical aspects of alternative collection and containment systems.

Land Design/Research Inc. Cost effective site planning. Single family development. Washington: National Association of Home Builders, 1976. [OMH: 711.417 L253 (not found); ARCH: TH 437 L36 1976]

--143 pages. The first part of the book is an introduction

to site planning elements (housing types, alternative organizations of space, setbacks, streets, right-of-ways, parking, energy conservation, and so forth). The second section presents 25 different small scale site layouts for parcels of land varying from one to four acres. Each design is presented with plans, and an analysis of key cost factors such as density, street lengths and widths, right-of-ways, building set backs, and driveway coverage. Summary comparisons of these designs provide cost per unit data. The third section presents a similar analysis of larger parcels of land, providing a general discussion of community or subdivision design, and a case study of a 166 acre development in Ohio. Two site designs of this tract are presented--one a conventional layout of 3 units per acre, and the other a cluster plan of 3.6 units per acre--with a detailed analysis of site preparation, road and utility requirements; the development costs of the alternative plans are compared. This source is notable for its careful and thorough presentation of designs, and for its detailed cost analysis of site preparation and servicing of alternative small and large site designs.

Land Design/Research, and National Association of Home Builders. Planning for housing. Development alternatives for better environments. Washington: National Association of Home Builders, 1980. [MTL-MR: 333.77 L12]

--106 pages. A resource manual for the planning of residential communities. It presents design ideas which have been used in successful housing developments, and are proven to provide better living environments and to be cost-effective and energy-efficient. Sections: 1. basics of residential communities (central characteristics of attractive and effective housing developments); 2. new attitudes vs. old practices (new consumer acceptance of smaller lots and better design, unmatched by old zoning ordinances and cumbersome process); 3. using land more wisely (advocating higher density and better site design); 4. small lot developments (cluster and attached housing described and illustrated, with a discussion of important design characteristics); 5. energy-conserving development (energy savings through layout and landscaping, and through alternative construction of buildings, streets and services); 6. less emphasis on automobiles (overdesigned streets, parking, and ways to reduce the visual impact of parking); 7. trees are more than an amenity (trees used for energy conservation). This is an attractive book presenting many ideas and illustrations (photos and plans) of well designed medium density developments, intended to present designs for livable but cost-effective housing.

National Association of Home Builders. Alternatives to Public Sewer. Washington: NAHB, 1978. [OMH: 628.7 N153]

--106 pages. Manual produced by NAHB's Committee on Construction Savings of the Single Family Division which sets out alternative sewage and waste water collection and treatment systems. It describes systems of all sizes (community,

subdivision, and individual units). The manual's objective is to present recent technological developments which might save developers the high cost of gravity systems, where (1) site density is low and/or (2) rocky or hilly sites make the laying of conventional gravity lines very costly. Each alternative described has been approved by at least one U.S. regulatory agency. Because the manual's focus is on systems for low density or difficult sites, its usefulness for low cost higher density housing is limited.

Ontario Ministry of Housing. A guide to residential planning and design in small communities. Toronto: Ontario Ministry of Housing, March 1980. [OMH: 711.6 O60]

--62 pages. Intended as an overview and introduction to site design of single-family housing developments. All aspects of design are addressed: site assessment, servicing, street and lot layout, landscaping. Its usefulness is limited, however, both because of its introductory nature and because it discusses chiefly low density developments.

Ontario Ministry of Housing. Residential Site Design Alternatives in Small Communities. Toronto: Ontario Ministry of Housing, September 1981. [PPDB]

--24 pages. Presents four alternative site designs of one area typical of the growing edge of a city (near arterial roads and existing housing developments). The first three designs incorporate 60% detached, 30% semi-detached and 10% street townhouses; the fourth design has a higher proportion of semi-detached and townhouses. Alternative lot sizes, lot orientations, road allowances, and storm sewer designs are considered, as well as landscaping and conservation of space heating energy. Detailed analyses of costs of each design are provided, and significant savings from different designs demonstrated.

Ontario Ministry of Housing. Site planning guidelines for medium density housing. Toronto: Ontario Ministry of Housing, January 1980 [OMH: 728 O61]

--81 pages. A detailed and comprehensive set of recommendations concerning all aspects of site design of medium density housing. The introduction (chapter 1) stresses that the recommendations are guidelines and not regulations, and are intended to help smaller communities without planning departments or limited planning resources to assess proposed medium density developments. A definition of density is set out, and a description of the density addressed by the guidelines (22-40 units per hectare). Chapter 2 provides information concerning density and housing form (possible housing forms and site design examples of various densities). Chapter 3 addresses the relationships between medium density housing developments and their community context (commercial, transportation and recreational needs arising from medium density developments, and community design features [housing

mixes] to accomodate these needs), and provides three alternative density mixes for a hypothetical community area.

The following chapters set out specific and detailed recommendations, together with examples, concerning: open space systems (alternative designs of open space at both housing development level and community level); distances between buildings, separation space and privacy zones; landscape design; play spaces; community and recreation facilities; parking; roads and drainage; refuse collection and maintenance; safety and security; energy conservation; noise; and visual considerations. Concluding chapters briefly discuss the planning and regulatory process (zoning and site plan approval), and provide a summarizing "check-list" of the guidelines.

Ontario Ministry of Housing. Urban development standards: a demonstration of the potential for reducing costs. Toronto: Ontario Ministry of Housing, March 1976 (Second edition, 1983). [OMH: 333.38 060ud 2nd ed.]

--approx. 100 pages. A detailed and comprehensive hypothetical case study showing potential cost savings in alterations to site standards and site design. Proposed alterations to current planning fall into two categories: reduced site planning standards (lot size, public open space) and reduced site engineering standards (layout and design of roads, sewers, water and utilities). After a section setting out current standards and proposed alternatives, a case study is presented. Two hypothetical standard sites were developed--one typical of large Ontario cities (mix assumed: 50% detached, 20% semi-detached, 20% street townhouse; 10% linked) and the other typical of smaller Ontario communities (mix assumed: 80% detached, 20% semi-detached). Typical current site plans are set out and costs analysed, and savings realized by proposed alternatives. Effort has been made to propose changes to standards which would be acceptable to residents, municipalities, the province and CMHC. Some concern is expressed over effects on tax revenue and servicing costs to municipalities, and whether savings from site planning would be passed to consumers.

The second edition (1983) makes no changes to the proposed standards but includes a new appendix detailing actual uses of the reduced and innovative standards proposed in the 1976 edition.

Ontario Ministry of Municipal Affairs and Housing. Urban development standards. A review. Toronto: Ontario Ministry of Municipal Affairs and Housing, June 1982. [OMH: 333.38 O60ur]

--30 pages. A review of the subdivision site design and servicing standards proposed in the Ministry's Urban development standards, 1976 (see entry above). Three areas of concern are addressed: 1. whether the standards proposed in 1976 are still appropriate and "compatible with current trends in innovative subdivision design practice" (conclusion reached: the standards remain appropriate and need no revision, but

subdivisions designed to these standards require "Comprehensive Planned Development"--that is, careful design and siting of housing units to ensure privacy, aesthetics, and a properly functioning development); 2. whether subdivisions designed to proposed standards adversely affect municipal revenues (conclusion: while such subdivisions demand higher servicing costs to municipalities they also generate more revenue, so the overall fiscal impact of both conventional and proposed subdivisions is very similar); 3. what energy consumption savings or costs were realized in proposed subdivisions (conclusions: significant energy consumption savings will be realized in the proposed subdivisions due to reductions in sewers, roads and other services, and minor savings in street lighting, street maintenance and water pumping).

Paul Theil Associates. Comparative subdivision servicing study. Cost analysis of new techniques. HUDAC Technical Research Committee. Toronto: Housing and Urban Development Association of Canada, December 1979. [OMH: 690.586 H883co]

--55 pages. A report of innovative and more cost-effective subdivision servicing techniques. Section headings: sanitary sewers (savings through reduced diameter and curvilinear sewers), manhole spacing, storm drainage (a detailed cost assessment of alternative systems), water distribution (water main materials, valves, hydrants), service connections (trenching of storm and sanitary sewers and water connections), streets (right-of-ways, pavement widths, curbs, sidewalks; both design features and construction methods are assessed). In each section detailed cost evaluations of alternative methods are presented. The stated major purpose of the report is to encourage municipal regulatory officials, municipal engineers and consultant engineers to adopt the more cost-effective methods.

Paul Theil Associates. Design guidelines for residential streets. HUDAC Technical Research Committee. Toronto: Housing and Urban Development Association of Canada, 1977 [OMH: 690.586 H883de]

--40 pages. Reports more cost-effective layout and construction of subdivision streets. Topics include street classification (and different standards for different classifications), street layout, right-of-ways, pavement widths, location and trenching of services, sidewalks, curbs, drainage and parking.

Paul Theil Associates. Update on sanitary drainage and sewage disposal methods. HUDAC Technical Research Committee. Toronto: Housing and Urban Development Association of Canada, 1978. [OMH: 690.586 H883up]

--31 pages. A brief but comprehensive discussion of domestic waste water/sewage collection and treatment, addressing both current practice and alternatives. Some of the report is not relevant (sections concerning water-saving practices and devices, and alternative sewage treatment

practices), but the report includes sections concerning subdivision and lot sewer servicing which address methods to reduce servicing costs.

Paul Theil Associates. Zero increase in storm water runoff. HUDAC Technical Research Committee. Toronto: Housing and Urban Development Association of Canada, 1976. [OMH: 690.586 H883ze]

--34 pages. A report concerning alternatives to present storm sewers and storm water collection. The report's main focus is to present alternative storm water drainage systems which prevent ecological problems caused by standard storm sewers (depletion of water table, reduced flow and increased pollution in streams, erosion and flooding), but the alternative systems described are no more expensive than conventional storm sewers and are often considerably less expensive. The report is not a design manual but a useful and detailed description of new methods and alternative design considerations.

Sanders, Welford. The cluster subdivision: a cost-effective approach. Chicago: American Planning Association, Planning Advisory Service Report Number 356, 1980. [OMH: 309.2606 A512 R.356]

--29 pages. Chapter 1 introduces and advocates cluster housing. Chapter 2 provides a detailed analysis of several provisions for cluster housing in zoning ordinances of American cities (provisions addressing density transfer, review criteria, location, minimum size, open space requirements, and lot reductions). Chapter 3 discusses problems in developing good zoning ordinances for cluster housing (legal problems concerning whether cluster housing can be accomodated within existing zoning models; deciding on minimum size for subdivisions and lots; the usefulness of design manuals as alternatives to detailed zoning ordinances). Appendices provide bibliography and representative ordinances.

Sanders, Welford. Zero lot line development. Chicago: American Planning Association, Planning Advisory Service Report Number 367, 1982. [OMH: 309.2606 A512 R.367]

--22 pages. Part 1 is a brief introduction. Part 2 examines typical zero lot line ordinances from four American cities. Part 3 addresses other considerations beyond existing basic ordinances that affect the quality and public acceptibilty of zero lot line housing: location in existing communities, good site design (including discussion of open space and landscaping) and requiring site plan review. Appendices give representative ordinances.

Sanders, Welford, Judith Getzels, David Mosena, and JoAnn Butler. Affordable single-family housing. A review of development standards. Chicago: American Planning Association, Planning Advisory Service, Report Number 385, August 1984 [OMH:

309.2606 A512 R. 385]

--115 pages. This report focusses on reduced costs achieved through alterations in density and unit design, and also discusses problem areas created by such alterations (the need for parking, open space and privacy). Section 1 discusses alternative standards which have been developed and used in 13 American communities which encouraged afordable housing projects through regulatory and planning innovations. Section 2 discusses two case studies in considerable detail, showing not only site design but also unit design, open space and parking. Two appendices show effective current legislation and standards from all over the U.S.

Untermann, Richard, and Robert Small. Site planning for cluster housing. New York: Van Nostrand Reinhold, 1977. [OMH: 711.6 U61]

--306 pages. An extensive treatment of the design of cluster housing developments, focussing throughout on the habitable quality of design and giving many examples of design features to avoid. Both small and large scale developments are addressed. This is a useful and thorough introduction to the evaluation of site design, and presents many creative and attractive design features.

Urban Land Institute, American Society of Civil Engineers, and National Association of Home Builders. Residential storm water magagement. Objectives, principles, and design considerations. Washington: Urban Land Institute, American Society of Civil Engineers, and National Association of Home Builders, 1975. [ARCH and ENG: TD 665 U68 1975; MTL-MR: 628.21 R24]

--64 pages. An introduction to the then-developing alternative design of storm water management systems which attempt to retain and control water on site rather than disposing of it in closed sewering systems. This resource is intended both as an introduction to the rationale and advantages of the alternative system, and as a detailed overview of all aspects of the function of the system. Though the book does not address questions of cost (focussing instead on efficiency and prevention of problems inherent in conventional systems), the alternative system has been shown to be more cost-effective (for example, Paul Theil Associates, Zero increase in storm water, and G. M. Chambers et al., Evaluation of stormwater impoundments; see entries for both above).

SECTION 4: Housing Unit Design and Engineering

Anderson, C. "Small lessons." Builder 7 (June 1984), 100-109. [OMH: Periodicals.]
--Description of successful design features of smaller houses marketed to lower income first home buyers.

Anton, Frank. "Homes buyers can afford and expand." Builder 6 (March 1983), 66-69. [OMH: Periodicals.]
--Description of a housing development in San Francisco where units sell for 50% less than the median price of housing in the San Francisco area. Units are small (700 sq.ft.) but with design innovations to allow ready expansion (for example, all mechanical, plumbing and electrical services in one wall; provision of city-approved plans for standard expansions).

Anton, Frank. "The new American home." Builder 6 (December 1983), 54-75. [OMH: Periodicals]
--Demonstration house sponsored by Builder and Good Housekeeping magazines and the National Council of the Housing Industry (a subset of the NAHB). The house was built near Houston, Texas, and was designed to be an affordable home marketed to young families at approximately U.S. $80,000, and to demonstrate recent cost effective and attractive innovations in design, construction materials and techniques.

Canada Mortgage and Housing Corporation. Internal spaces of the dwelling advisory document. Ottawa: CMHC, 1984. [OMH: 351.725 C397 85-30]
--101 pages. Design criteria for size and layout of all internal spaces of a housing unit. This is one of a series of CMHC documents intended to promote sound planning and good design (and to set out obligatory design criteria for social housing and developments using CMHC insured lending functions). Research supporting these criteria included literature studies and user surveys of fifty case studies of different types of Canadian dwellings. In general the criteria urge designs that enforce "a minimum predetermination of the pattern of use" but which facilitate the most likely uses (determined by user research) of each specific category of space. The book is structured on eight categories of internal space--entrances and corridors, living rooms, dining rooms, kitchens, laundries, bedrooms, bathrooms, and storage and utilities--and for each category presents design recommendations based on an analysis of space function, furniture/fixture requirements, clearances, size and number (number of spaces required for same function), configuration (layout), and location within unit. This is a good source for assessing the conformance of small housing designs to CMHC standards, and (if CMHC's criteria are not excessive or too

manufactured housing in Canada, including previous governmental research (focussing on mobile homes), impact on the market and future projections, and a report concerning a CMHC conference on manufactured housing in Calgary 1985. Section 3 discusses market opportunities. Section 4 makes recommendations to boost development and use of manufactured housing, to remove governmental zoning and regulatory impediments. An appendix states availability of detailed research reports which were used in preparation of the text (but is not a bibliography).

Canada Mortgage and Housing Corporation, Canadian Housing Design Council. National Housing Design Competition 1979/ Concours national de modeles d'habitations, 1979. Canada Mortgage and Housing Corporation, August 1979. [OMH: 728 C212 1979]

--200 pages. An important Canadian source for good design of medium density housing. This design competition is part of a series of competitions published by the Canadian Housing Design Council (see entry below, Canadian Housing Design Council/Conseil canadien de l'habitation. Awards for residential design/Prix du modele d'habitation), but in 1979 under the sponsorship of CMHC the competition focussed exclusively on medium density dwellings (25-75 dwellings per hectare), as part of CMHC's intent to encourage well designed but cost effective housing. The report of winning designs is prefaced with an extensive discussion of the criteria of assessment (with examples drawn from the designs themselves), as follows: dwelling amenity (characteristics of unit planning and livability, outdoor living areas, address [entrance] and accessibilty), site organization (circulation and parking, public and private open space, play space for children, access for service vehicles), technical feasibility (building and infrastructure costs [which could not always be assessed accurately since detailed data on cost was not required of competitors], energy conservation), and architectural expression. Five regions across Canada were designated, and different "typical" target densities set (the highest density--75 units per hectare--was demanded in Ontario); awards were given for designs in each region. The Quebec submissions in particular were notable for cost-effectiveness. As in the CHDC's series, detailed descriptions and assessments of the merits and drawbacks of each design are given.

Canadian Housing Design Council/Conseil canadien de l'habitation. Awards for residential design/Prix du modele d'habitation. CHDC/CCH, 1964--1983. [OMH: 728 C212 1964--1983.]

--Reports of an Award program begun in 1956 by CHDC/CCH to encourage housing design in Canada. Winning designs and designs meriting honourable mention are illustrated by photographs, plans and site plans, and are accompanied by designers' comments and jury assessments. Awards/Prix was published in 1964, 1967, 1969, 1971, 1974, 1976-77, 1981, and 1983 (and in a different form in conjunction with CMHC in

1979--see entry immediately above). Each year awards are offered in categories of single detached houses and multiple unit housing (with differing sub-categories in different years). Awards for multiple housing pay close attention to site design. Most of the single detached dwellings would not be classed as affordable, but some medium density and high density/low rise designs are of interest. Designs described as low-cost or affordable are: 1976-77: pages 52-53, 56-57, 58-61, 62-63; 1981: pages 30 (a zero lot line development), 36-37, 40-41 (another zero lot line development), 56-59, 82-83, 84-85, 90-91, 92-93, 98; 1983: pages 49-50, 65-66, 67-68, 69-70, 71-72.

Canadian Wood Council. Construction guide for preserved wood foundations. rev. ed. Ottawa: Canadian Wood Council, 1977. [ENG: TH 1101 C38 1977 (ref)]

--approximately 30 pages. Complete construction details for foundations constructed from preserved wood (wood chemically treated to increase resistance to ground-contact decay). These foundations are claimed to be acceptable to CMHC and Ontario standards, to be less expensive than conventional foundations, and to provide more comfortable living areas.

Canadian Wood Council. Preserved wood foundations. Canadian Wood Construction Data File WB4. Ottawa: Canadian Wood Council, 1984. [OMH: 694.1 C2122]

--40 pages. An update and expansion of Canadian Wood Council, Construction guide for preserved wood foundations (see entry immediately above).

Devereaux, William, and Leslie E. Stockman. "Floor plans." Builder 7 (November 1984), 82-87. [OMH: Periodicals]

--Floor plan design solutions of problems of reduced floor space in high density housing. Three examples are discussed and illustrated: patio house, duplex, and townhouse.

Devereaux, William, and Leslie E. Stockman. "Think small: kitchens and baths." Builder 6 (November 1983), 66-71. [OMH: Periodicals]

--Design improvements to small kitchens and bathrooms.

Eccli, Eugene. Low-cost, energy-efficient shelter for the owner and builder. Emmaus, Pennsylvania: Rodale Press, 1976. [ARCH: TH 4815 L68]

--408 pages. Intended as a comprehensive resource for owner-builders/owner-contractors, so not relevant in general. Ch. 6, "Smaller houses which utilize space and materials more efficiently," sets out alternative designs of space efficient floor plans which are unlike conventional designs (such as those found for example in CMHC's Modest house designs). The chapter also discussess alternative construction techniques

(for example, post and beam foundations, slab foundations, alternative wall framing) which are probably inapplicable to Ontario because of building codes and climate.

Gault, Lila, and Jeffrey Weiss. Small houses. New York: Warner Books, 1980. [ARCH: NA 7205 G38]

--96 pages. Description and photographs of small houses (almost all under 1200 sq.ft.), including both restorations of older houses and innovative new houses. Each house is described by two or three pages of text, accompanied by photographs of exteriors and interiors. Few of the houses are conventional, and many contain interesting, innovative and attractive design features. Several of the houses were inexpensively built. The authors' broad focus is on small scale houses of many sorts, but they intend also to present ideas for attractive houses at moderate cost.

Greater London Council. Preferred dwelling plans. 2d ed. London: Architectural Press, 1978 (1st ed. 1977). [OMH: 728.3 G786; MTL-MR: 728.10973 P59] (OMH holds only the 1st ed., but the 2d. ed. is not heavily revised)

--84 pages. Housing unit designs developed and recommended by the Greater London Council, which meet its criteria of maximum flexibility of use and maximum building efficiency. It is claimed that use of these plans will reduce construction costs since each unit uses standard components (such as straight staircases, repetitive bathroom and kithchen layouts, and interior finishes which have been standardized), and since the materials required for each unit are fully documented. Plans include units for from three to six persons, at high and medium densities. A brief discussion of how these units might be placed on a site is provided, with three examples of recommended layouts.

Jordan, Wendy Adler. "A house that has it all...someday." Builder, December 1982. [PPDB (photocopy); OMH: Periodicals]

--A very brief article describing a wood frame 2 bedroom house, designed to incorporate many desired features, to use space efficiently, and to be readily expandable, for a cost (exclusive of land) of $50,000 to 60,000 (U.S.). The design was published in Family Circle magazine, and the centre of a publicity campaign by a Florida developer. The article also describes public response.

Langstrom, Robert A. "Design guidelines for townhouses and condominiums." Urban Land 37, no. 7 (July-August 1978), 22-28. [OMH: Periodicals]

--Results of a survey of residents of townhouse and condominium developments in Seattle, in the form of design recommendations which reflect the preferences of the group surveyed. Most of the group were middle-aged couples without children at home. Key recommendations concern the need for

defined and usable outdoor territory, design features which enhance the perception of spaciousness, and storage space. Detailed discussion and examples of designs which achieved these needs are provided.

Levenson, Reid. Flexibility for Canadian housing. A state of the art review. *CMHC, December* 1979. [ARCH: HD 7305 A3L48]

--115 pages. Addresses problems of aging housing stock in Canada, and housing forms which are not adaptable to changing uses; reviews design experiments and ideas which make housing sites and structures more adaptable to changing needs and uses. Because the focus of the report is strongly alternative housing designs--for example, modular service units (plumbing, electrical), movable partition walls and so forth--its utility in research on low cost housing is perhaps minimal.

Link, David E. Residential designs. How to get the most for your housing dollar. Boston: Cahners Books, 1974. [MTL-MR: 728.0973 L38 (must be retrieved from storage)]

--163 pages. A collection of design proposals originally published as part of "Design lab," a series in Professional Builder magazine. The book presents ideas for all aspects of housing unit design: introductory sections discuss unit and site considerations, then sections on particular aspects of design follow (for example, exterior finishes, indoor/outdoor relationships, doors and windows, and so on). The primary focus of the book is improvement to housing environment but consideration is given to cost-effectiveness, and many ideas are presented which could improve the habitability of conventional small homes.

Manitoba Housing and Renewal Corporation. Award winning designs for infill housing. Manitoba Housing and Renewal Corporation, n.d. (1983?). [ICURR: BG 157]

--Approximately 30 pages. Winning designs for small lot houses submitted to a Manitoba government design competition to provide new homes in older areas to be built under the Homes in Manitoba Program. One aspect of the designs--that they reflect the character of the homes adjacent to them--is not relevant to the goals of the Starter Homes project, but the houses also had to meet criteria of energy efficiency, effective and functional use of limited space, and affordability. Houses are designed for 25 or 33 ft. lots, and range in floor area from 850 to 1200 sq.ft. Designs are shown with elevation drawings and floor plans.

Mayer, Martin. "Builders and buildings." Chapter 10 in The builders. Houses, people, neighborhoods, governments, money. New York: Norton, 1978, pages 229-252. [OMH: 301.363 M468]

--In this chapter Mayer describes the successful Dallas house building firm, Fox and Jacobs. Fox and Jacobs built 35% of all new housing in Dallas in one year, and 65% of all

housing in the low and lower-middle price range. Their operation consists of off-site preparation of all structural components (lumber and sub-contracted trusses), including off-site construction of partition sections, and transport by truck to the housing site for assembly on a tight, carefully controlled schedule. Fox and Jacobs also run a concrete operation; foundations are poured concrete slabs. The company has introduced savings in materials (for example, using 24" centres for studs, rolled roofing etched to resemble shingles, and optimum layouts of plumbing and wiring) and increased labour savings not only by pre-cutting and premanufacture but also by innovative tools like pneumatic hammers. Fox and Jacobs houses sell at two-thirds the price of a comparable average American home.

Murray, James A. Potential for innovation and improvements in housing production and marketing. Report to the Ontario Advisory Task Force on Housing Policy, April 1973. [OMH: 711.58 C728 po (not found); MTL-MR: 301.54097 O554.2 no.8 (must be retrieved from storage)]

--75 pages. A wide-ranging exploration of possible innovations in housing policy and housing design. The section concerning policy is very general and does not address regulatory reform. The section concerning housing design addresses all aspects of design: building codes and regulations governing construction, reconciliation of density and livability, and social-recreational provisions in multiple dwelling environments. The report does not address innovations in building materials or techniques, but is notable for its ideas concerning acoustical and visual privacy, alternative multiple unit design, and designs of units which are structurally adaptable to user preferences and needs.

Nutt-Powell, Thomas E. Manufactured homes. Making sense of a housing opportunity. Boston: Auburn House, 1982. [OMH: 693.97 N976]

--193 pages. A summary of recent developments in the manufactured housing industry (chiefly mobile homes): construction processes and regulations; innovations and research concerning quality; marketing and distribution; governmental policies (State and federal) relevant to manufactured housing. The book advocates the expanded use of manufactured housing, and proposes throughout means of accomplishing this.

Ortega, Alvaro, Witold Rybczynski, Samir Ayad, Wajad Ali, and Arthur Acheson. The ECOL operation. Ecology + building + common sense. Montreal: Minimum Cost Housing Group, School of Architecture, McGill University, 1972. [ARCH: HD 7287 E2]

--100 pages. A minimum cost shelter developed at the McGill architecture school, whose chief application would be in underdeveloped countries. The main structural innovation was the use of sulpher bricks, and much of the book discusses the

cheapness and availability of this material, and the ease of production of high quality bricks using simple molds and power carpentry tools.

Quinn Dressel Jokinen (Consulting Structural Engineers), William McCreery Architects, and RPA Consultants. Innovative use of on-site precast structures for low and mid-rise housing. Edmonton: Quinn Dressel Jokinen/Alberta Department of Housing, September 1983. [ICURR: BH 004]

--60 pages, plus appendices. A report of two innovative cast concrete building techniques applied to housing in Alberta, funded under a grant from the Alberta Department of Housing's Innovative Housing Grants Program. The techniques involve pre-forming of modular units on or very near the site of construction, which realizes savings because of reduced transportation and damage costs, and because of reduced overhead costs (no factory is required, and less expensive equipment). The techniques also use the modular units in construction in innovative ways. A bibliography lists many references concerning on-site concrete casting techniques. (This report may have been published earlier by Alberta Housing and Public Works under the title Precast housing study.)

Steven Winters Associates. Building value into housing. 1980 awards. A compendium of winnning submissions under HUD's 1980 "Building Value into Housing Program." Washington: United States Department of Housing and Urban Development, Office of Policy Development and Research, November 1980. [MTL-MR: 728.37022 B77]

--75 pages. Report of seventeen projects awarded grants under HUD's "Building Value into Housing Program" in 1980. The projects all apply "value engineering" to housing (successful measures to maintain or increase quality and decrease cost), using a wide variety of materials and techniques in a wide variety of housing forms (for example, attached housing, earth-sheltered housing, super-insulated housing, and forms more conventional in appearance). Each project is reported with a drawing of the proposed housing unit, a building section (cross-section through structure), floor and site plans, elevations, and detailed wall section or other relevant construction drawing. This is a valuable resource showing very attractive housing units which are designed explicitly for cost-effectiveness.

Steven Winters Associates. Design for affordable housing: cost effective/energy conserving homes. Washington: United States Department of Housing and Urban Development, Office of Policy Development and Research, January 1983. [ICURR: BG 162]

--Approximately 50 pages. Designs of 22 energy-efficient and cost-effective single family detached homes, of various size (under 1000 sq. ft. to over 3000 sq. ft.) and various design (though none are too unlike conventional houses). In

addition to the general purpose of cost- and energy-efficiency, most of the designs have a more specific goal (for example, to incorporate passive solar energy collection into a home with a standard popular floor plan). Each design is illustrated with a perspective drawing, floor plans and elevations; a brief text indicates square footage, name of designer and contractor, the specific purpose of each design and special features not obvious from the drawings. Construction plans for each house are available from HUD. Of particular interest are the small homes collected in the first section (A1-A6), which all feature innovative design and reduced construction costs, and would be suitable starter homes.

Steven Winter Associates. Designing affordable housing. Washington: U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Building Technology Division, November 1983. [ICURR: BG 161]

--21 pages. A supplement to Steven Winter Associates, Design for affordable housing: cost effective/energy conserving homes (see entry above). This resource analyses the functional elements that form the major components of small houses (under 1200 sq.ft.), the effects of varying the proportions of these elements, and the ways in which these elements can be manipulated to provide different house plans. The designs are for single story, single family dwellings, but could be readily adapted to split-entry or split-level houses, and are completely adaptable to other configurations such as zero lot line or attached houses. Many different layouts of rooms are presented, each with typical furniture/fixture arrangements and an analysis of function and circulation.

Stockman, Leslie E. "Best from the west." Builder 7 (June 1984), 82-99. [OMH: Periodicals]

--Recent design awards reported, including an "affordable home" attached housing development in Texas, where units sold for U.S. $50-70,000 [1984?] (pages 98-99).

United States Department of Housing and Urban Development. Housing system proposals for Operation Break-through. Washington, United States Department of Housing and Urban Development, December 1980. [OMH: 693.97 H882ho]

--Aproximately 600 pages. Abstracts of 423 housing systems proposed in response to HUD's Operation Break-through request for proposals of high-quality, high-volume housing construction systems. Approximately half of these are "full-information" proposals whose abstracts provide information concerning the building system and production, dwelling characteristics, and cost; the rest are proposals requiring further development and testing whose abstracts indicate information available. Each proposal is illustrated by plans and drawings or photographs. HUD's call for proposals was not limited to lower-cost housing, but most of the proposals aim for reduced costs of production.

Ural, Oktay. Construction of lower-cost housing. Wiley series of practical construction guides, edited by M. D. Morris. New York: John Wiley and Sons, 1980. [OMH: 690.8 C755]

--276 pages. This book aims to give a general introduction to old and new construction techniques to reduce the cost of housing. Two features of the book reduce its usefulness to this project: it is very general, and it is directed to an international context (with the result that many techniques discussed would not be usable in Ontario). Chapter 2 discusses cost and construction characteristics of various building materials (concrete, wood, metals, stone, plastics, soil); chapter 3 presents an overview and some detailed discussion of "classical" construction methods for low-cost low-rise housing from various climates and cultural areas; chapters 4 through 7 discuss various levels of pre-manufacturing in housing construction, and provide an overview of existing manufactured housing systems in the developed world; chapter 8 discusses owner-assisted construction; chapters 9 and 10 give case studies in India and Venezuela.

SECTION 5: Market Research

Boag, David A., and Asit K. Sarkar. Housing affordability and acceptibility as influenced by consumer trade-off perceptions. Canada Mortgage and Housing Corporation External Research Program Research Report, February 1984. [ICURR: HI 100]

--90 pages. A report and analysis of a survey of potential home buyers, and follow-up survey after home purchase, in Edmonton and Saskatoon. The intent of the surveys and their analysis was multiple. The authors attempt to determine: what factors influence housing choice, what attributes of housing consumers are more or less willing to trade off for more valued attributes, whether preferred attributes differ among different demographic and socio-economic groups, whether pre-purchase stated preferences accord with purchase choices, and whether the housing industry produces housing which meets the preferences of consumers. Part 1 reports conclusions from other research of housing preferences. Part 2 describes the research design and methodology used in this study. Parts 3 and 4 report the results and analysis of the surveys. The preferences and expectations of lower-income potential buyers are addressed throughout.

Canada Mortgage and Housing Corporation. Housing Issues in the 1980s and 1990s. Factors which will affect structural adjustments in the residential construction industry. Prepared for the 43rd National Conference/Exposition, Canadian Home Builders' Association, 2-5 February 1986, Edmonton, Alberta. [PPDB]

--a small paper (25 pages) summarizing projected demographic and economic trends to the end of the 1990s and their effect on market for housing starts and renovations. Includes analysis of market categorized by age group, and analysis of projected supplies of land, materials, labour and capital. A very brief section (pages 11-12) lists alternatives available to the industry to enter a lower-income market, but this section depends on CMHC's Opportunities for Manufactured Housing in Canada (see entry in Section 4, Housing unit).

Harding, Michele, Kerry Wasserman and Andrew Zdanowicz. User study: zero lot line concept. Ontario Ministry of Housing, July 1975. [OMH: 711.5 H842]

--see description in Section 1, General.

Jensen, David R., and HOH Associates. Zero lot line housing. Washington: Urban Land Institute, 1981. [ARCH: NA 9051.5 J4 *in Roba?]

--Includes an extensive discussion of market acceptability and buyer profile of zero lot line housing in the U.S. See description in Section 1, General.

Ruston/Shanahan and Associates. A consmer preference survey of the moderate priced house market in Ottawa. HUDAC Social Research Committee. Toronto: Housing and Urban Development Association of Canada, May 1978. [OMH: 728.37 R971]

--170 pages. Report of preferences of prospective lower-income home buyers, based on a survey structured on "trade-offs"--on determining what features home buyers desired within the limits set by affordability. An appendix shows the questionnaire used, and the bulk of the report is an analysis and summary of the results. Each chapter analyses preferences in a specific category of housing characteristics: ch. 1, type of housing (whether detached, semi-detached or row); ch. 2, preferred compromises between house and lot size; ch. 3, preferences concerning relative size of front and back yards, type of lot separation, and lot servicing (paved roads, curbs, underground wiring); ch. 4, preferences of rooms and room characteristics; ch. 5, preferences concerning garage, basement, unfinished space, and other amenity features (such as paved driveways, large closets, rugs); ch. 6, consumer perceptions and preferences concerning condominiums (both town-house and apartment). In each case preferences are analysed by demographic characteristics of respondents where these are statistically relevant (for example, a characteristic preferred by a given age group, or by those earning less than a given amount, or by inexperienced or experienced buyers). Chapter 7 presents a very full demographic profile of the respondents to the questionnaire and, by extension, of the potential market for moderately priced housing. This source provides a careful analysis of the housing features thought most important by a group of potential buyers, and it (or a survey like it) would help developers produce housing responsive to market preferences.

SECTION 6: Potential resources not seen

INTRODUCTION:

Sections A, B, C and D list materials which have been recommended or referred to in the sources described by this bibliography, but which are unavailable in the locations researched. Section E lists periodical resources, which could not be surveyed due to time constraints. If a location or other information helpful for access is known, such is indicated in square brackets following the entry. Since these materials have not been seen, their utility to the Starter Homes project is not known, but either their title or their use in seen sources suggests that an investigation is warranted.

REFERENCES:

A. Available through NTIS:

NTIS is a data base accessible through the Ontario Ministry of Housing Library. Resources can be obtained in microfilm form, and duplicated if required. The Ministry's librarian prefers to order materials using information on NTIS's own listings. NTIS listings for materials cited below are supplied under separate cover.

Titles:

Academy for Contempory Problems. Affordable housing: local techniques that work. May 1981.

Council of State Community Affairs Agencies. State role in affordable housing: a bibliography. January 1983.

National Association of Home Builders Research Foundation. Affordable housing demonstration: case studies. (A series of reports on affordable housing developments throughout the U.S.; see NTIS listings for specific titles.)

U.S. Department of Housing and Urban Development, Office of Policy Development and Research. Affordable housing: a selected resource guide. February 1985.

B. Available through HUD USER:

HUD USER is a data base and repository of the Joint Venture for Affordable Housing (a public and private sector cooperative venture sponsored by the U.S. Department of Housing and Urban Development and many professional associations). Materials cited here are referred to in Affordable housing. A HUD USER

bibliography, listed above in Section 1, General, under the corporate author "Joint Venture for Affordable Housing." It is likely that other resources are also available through HUD USER.

Titles:

Fisher, E. Lee. Approach for the 80's: affordable housing demonstrations. Rockville, MD: National Association of Home Builders Research Foundation, 1983. [HUD USER: 0002337]

Hack, Gary, and Greg Polk. Housing cost and governmental regulation: is regulatory reform justified by what we know. Cambridge, Mass.: Harvard-MIT Joint Center for Urban Studies and Lincoln Institute for Land Policy, May 1981. [HUD USER: 0002443]

National Association of Home Builders. Approach '80. Washington: National Association of Home Builders, Land Use and Development Department, December 1980. [HUD USER: 0050832]

National Association of Home Builders. New home markets for the 80s: a roundtable. Washington: National Association of Home Builders, December 1981. [HUD USER 0002369]

National Association of Home Builders Research Foundation. Reducing home building costs with OVE [optimum value engineering] design and construction. Rockville, MD: National Association of Home Builders Research Foundation, 1978. [HUD USER: 0001154] Another reference to a source of the same or similar title, but dated 1981, was seen; perhaps there is a series.

Robinson, Jeremy, ed. Affordable houses designed by architects. New York: McGraw Hill, 1979. [HUD USER: 0002408; listed below also under access category C]

Sidor, John, and Marvin Tick. State actions for affordable housing. Washington: Council of State Community Affairs Agencies, July 1982. [HUD USER: 0002638]

Wible, Robert C. Model one-stop permit process for one-and-two family dwellings. National Conference of States on Building Codes and Standards. [HUD USER: 0002437]

C. CMHC Resources:

Auld, John W. Transfer of European housing information.... Canada Mortgage and Housing Corporation, 1983.

Bent, Colin, and Brian Clark. Study of a light weight metal framing system. Canada Mortgage and Housing Corporation, 1983.

Canada Mortgage and Housing Corporation. Housing technology incentive program. [CMHC publication no. NHA 5734]

Martin Associates. Alternative services and community design. Toronto: Martin Associates, 1983. (Study funded or sponsored by CMHC.)

Mason, D. L., and G. W. Austin. Shell housing: future role in housing supply. Canada Mortgage and Housing Corporation, 1982.

Teasdale, Pierre. A user and visitor evaluation of eight experimental townhouses. for CMHC, 1978. [ARCH: TH 4812 B435 (not found)]

Warshaw, L. OHCAN: Options in housing for Canadians. for CMHC, July 1976. [OMH: 728 N277 (not found)]

D. Other:

Alberta Department of Housing. Possible publications under its Innovative Housing Grants Program. One such publication is cited above in Section 4, Housing unit--Quinn Dressel Jokinen, Innovative use of on-site pre-cast structures...--but others may be available. The address of the program is:

Innovative Housing Grants Program
Fourth Floor
10050-112 Street
Edmonton, Alberta T5K 2J1

Babcock, R. The zoning game revisited. 1985 [ROBA: KF 5698 B27 1985] (Almost certainly a general discussion and critique of recent zoning theory and practice in the U.S.)

Hamilton, S. W. Land use and building codes: the regulatory framework. Economic Council of Cananda Working Paper.

Hamilton, S. W. Land use and building codes regulation: summary report. Economic Council of Canada Working Paper.

International City Management Association. Municipal innovation.

National Association of Home Builders Research Foundation. Building affordable homes: a cost saving guide for the builder/developer. Rockville, MD/Washington: National Association of Home Builders Research Foundation, 1982.

National League of Cities. Innovative zoning tools: streamlining your development process.

Paul Theil Associates. A new approach to engineering and planning for land development. (This resource probably dates from the mid-70s. Paul Theil Associates have produced several useful site planning resources cited above under Section 3, Site design.)

Professional Builder. Smaller, smarter, more affordable:

affordable housing ideas. Denver: Professional Builder, 1982. (Probably a collection of ideas or articles published in the periodical Professional Builder, which has an ongoing concern with affordable housing design and construction.)

Proudfoot, Stuart. Private wants and public needs. The regulation of land use in the Metropolitan Toronto area. Economic Council of Canada Working Paper. [OMH: 330.971 E19 WP.12 (not found); Univ. of Toronto Law Library: KF 5698 P76]

Rice Center, and the U.S. Department of Commerce National Bureau of Standards. A review of standards and common practices in building site regulations: technical issues and research needs. November, 1980. (Addresses building codes and site design regulations.)

Robinson, Jeremy, ed. Affordable houses designed by architects. New York: McGraw Hill, 1979. [Metropolitan Toronto Library (not in the Central or Municipal Reference Libraries, but in other branches such as Scarborough or North York); also available from HUD USER: 0002408 (and listed above under access category A)]

Schliewinsky, Frank. Design preferences and trade-offs for moderately priced housing in Alberta. Alberta Department of Housing, 1982.

Schmertz, M. Apartments, townhouses and condominiums. 1981. [MTL-MR: 728.31 A61 (not found; librarians unable to account for its absence so may be lost from collection)] (Recommended as a resource for good attached housing design.)

Seelig, Julie, M. Goldberg, and Peter Horwood. Land use control legislation in the U.S.: a survey and synthesis. Economic Council of Canada Working Paper. [OMH: 330.971 E19 WP.9 (not found); Univ. of Toronto Law Library: KF 5698 S42]

United States Department of Housing and Urban Development. Homebuilding cost cuts. Washington: U.S. Government Printing Office, 1983.

Zeisel, John, et al. Housing designed for families. Cambridge, Mass.: Joint Center for Urban Studies of MIT and Harvard University, 1981.

E. Periodicals:

Some journal articles are entered in the bibliography above, but these were surveyed early in the project when time constraints were not yet apparent and they by no means represent the range of possibly useful materials. Time constraints did not allow even a rapid survey of relevant periodicals.

A survey of one periodical resource was completed: PAS Memo (PAS = Planning Advisory Service of the American Planning

Association.) Relevant articles are described in Sections 1 through 5.

The periodicals listed below were cited in resources which were seen, but the list may not be exhaustive of useful periodical resources. Where a seen resource indicated that a specific issue was particularly relevant, the date of that issue is given in parentheses. Location of periodicals is given if known.

Titles:

Architect's Journal [ARCH, ENG]

Architectural Record [OMH] (see mid-1982)

Architectural Review [OMH]

Architectural Science Review (September-December 1983)

Builder [OMH]

Building

Building and Prefabrication

Building Design

Canadian Housing [OMH]

Canadian Wood Construction [OMH 694.1 C212z]

Civic Public Works [OMH]

Construction Review

Construction Specifier (August 1982)

Habitat [OMH] (26:3 and 27:3)

HUDAC Annual Review

HUDAC National Focus

Industrialization Forum [OMH]

International Journal for Housing Science and its Applications [OMH]

JAPA (Journal of the American Planning Association) [OMH]

Journal of Housing [OMH]

Land Use Law and Zoning Digest

Municipal Counsellor [OMH]

Open House

PAS (American Planning Association) [OMH]

Professional Builder [MTL-MR] (often cited; produced a series of issues--1981-82?--on affordable housing developments)

Progressive Architecture [OMH]

Rodale's New Shelter [MTL, either Municipal Reference or City Hall branches]

Select Homes [OMH]

Urban Land [OMH]

Zoning Planning and Law Report